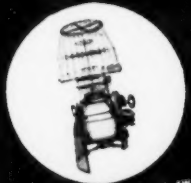
APRIL, 1952

Textile Industries

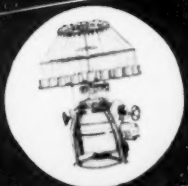
formerly
COTTON
Textile Industries



Model 3R—KNITS PLAIN OR SWISS RIB—up to 5b Yards Per Hr.

Model 5A-AJ—KNITS WIDE VARIETY OF VARIABLE STRIPES AND PATTERNS—up to 40.5 Yards Per Hr.

Model MJ—KNITS WIDE DIAMETER AND BODY-SIZE JERSEY—up to 125 Yards Per Hr.



Model ML—KNITS PILE, LOOP TERRY AND PLUSH—up to 35 Yards Per Hr.

EXTRA *Knitting News* EXTRA

NEWEST! PATENTED! SUPREME LRP KNITS STRIKING, NEW AIR-COOLED FABRICS

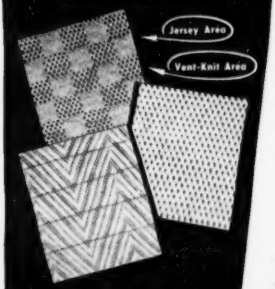
...Supreme LRP *vent-knit*... ...n-cooled cloth th... ...nique. It knits patterns ...strong.

Model...

LATEST SUPREME DEVELOPMENT —MODEL LRP—PRODUCES

VENT-KNIT

A NEW FABRIC WITH SUPER SALES APPEAL



Be sure To See The New LRP in Action At SUPREME BOOTH Nos. 63, 64 & 65 During The Knitting Show, Grand Central Palace, New York City, April 21 through 25.

Supreme announces an amazing, new summer wear and underwear sales-knitter, the Model LRP.

It knits patterns of air . . . produces wonderful, decoratively cool fabrics by placing open-stitched areas in a plain jersey background. These open, *vent-knitted* areas are large, sharply-defined patterns capable of wide variations in design.

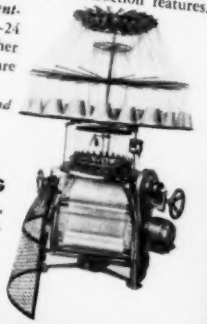
The *vent-knit* pattern is a firmly constructed latticework of stitches with scores of openings or air vents to let heat out and coolness in. The breeze-cooled comfort and beautiful effects give the cloth super sales appeal.

Ventilated Yet Full-Bodied, Run Resistant and Shape Retaining—With a unique arrangement of cams, sinkers and pattern wheels the LRP *vent-knits* pattern-cooled cloth that is strong, full bodied, run resistant and lastingly elastic. Combination rayon and cotton or other mixed yarns can be used to produce many startling fabric variations.

Dollar-Reaping Production Rates — The new Supreme LRP pours out a wide variety of *vent-knit* cloth at rates up to 28 yards per hour. The machine has Supreme's mill-proven, trouble-free design and production-boosting construction features.

The standard Model LRP *Vent-Knit* Machine is 24" diameter—24 Feeds—18 needles per inch. Other diameters and cylinder cuts are available.

Write for free information and cloth samples.



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Volume 116 Number 4

For FURTHER PROOF OF X-2 EFFICIENCY...

Report of: W. M. Baldwin
Week ending: 2/7/52

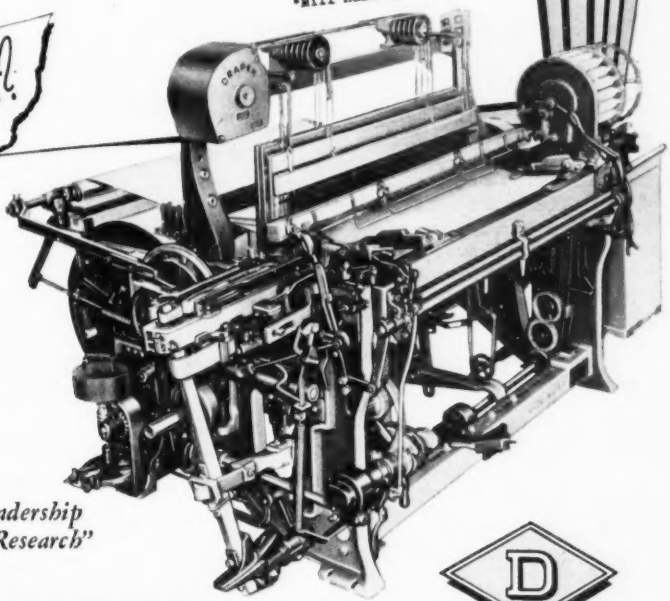
_____Mills*

They certainly are doing a swell job here on the X-2 Model looms; construction 44x40 sheeting, efficiency 96%, seconds 3%, looms per fixer 96, looms per weaver 96, and loom speed 196 P.P.M.

When I was in the weave room, Mr. _____ pointed out two weavers that were sitting on a box with all looms running.

*Will name upon request.

Need we say more?



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DRAPER *Corporation*

ATLANTA, GA. HOPEDALE, MASS. SPARTANBURG, S. C.

THE WORLD'S LARGEST MANUFACTURER OF AUTOMATIC LOOMS

UP GOES PRODUCTION OF TOP QUALITY YARNS....

when you ..... SPIN WITH SPINDURA

Lubricate spindles with *Texaco Spindura Oil* and it's good-by to vibration, hunting and lagging. *Texaco Spindura Oil* has extra resistance to oxidation, thickening and gumming . . . assures fewer ends down. Result — production of smoother, cleaner yarn goes up . . . maintenance costs drop.

Texaco Spindura Oil eliminates "drag" in starting and running. This means full speed operation with heavier packages, less power consumption and trouble-free performance. Yarn spoilage and wastage are reduced because *Texaco Spindura Oil* will not atomize or "fog."

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ABC NBP

Textile Industries

COTTON

Volume 116, Number 4
April, 1952

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For names and addresses of editorial and business representatives, see page 259

12 times faster!

Grades 1000-foot sample of yarn in 3 minutes!

• With the Uniformity Analyzer, originally designed by the Institute of Textile Technology, you can check and grade the uniformity of yarn, roving, or sliver at high speeds. Using the recommended sample for accurate measurement—about 1000 feet—you can make the check in a little over 3 minutes, compared to 40 minutes for other methods.

The answer is given to you completely—in writing. In addition, the operator has a meter, which indicates average wool or cotton count or percentage non-uniformity.

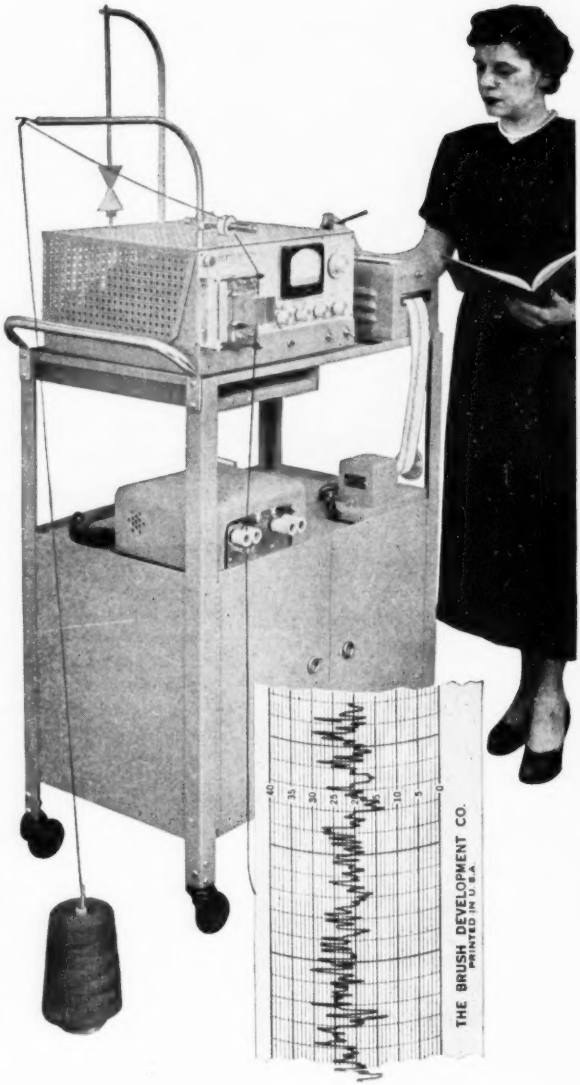
CHECK THESE FEATURES OF THE UNIFORMITY ANALYZER!

HIGH GRADING SPEED
HIGH ACCURACY
3 AVERAGING CIRCUITS
SIMPLE SERVICING
ECONOMY

The Uniformity Analyzer is designed for sustained high accuracy regardless of speed. A zero line is recorded on the graph, when no material is being checked, thus reducing drift errors and change in average yarn count. With the zero line recorded, the operator knows the true mean of the yarn sample. Guesswork is eliminated. Three averaging circuits make it easy to spot periodic faults in the yarn. Long-term variations are apparent.

The Uniformity Analyzer is sold and serviced through regular Brush instrument representatives located throughout the U. S. Spare parts and technical assistance can be obtained readily.

Take the first step now for better quality control . . . write The Brush Development Company, Dept. T-23, 3405 Perkins Avenue, Cleveland 14, Ohio. Canadian Representatives: A. C. Wickman Limited, Toronto.



This chart records non-uniformity of a 25-count cotton yarn. Chart indicates 49.9% gross deviation from nominal weight per unit length. The Uniformity Analyzer is calibrated for cotton or wool, as specified, and can be adapted for other materials.

THE **Brush** DEVELOPMENT COMPANY

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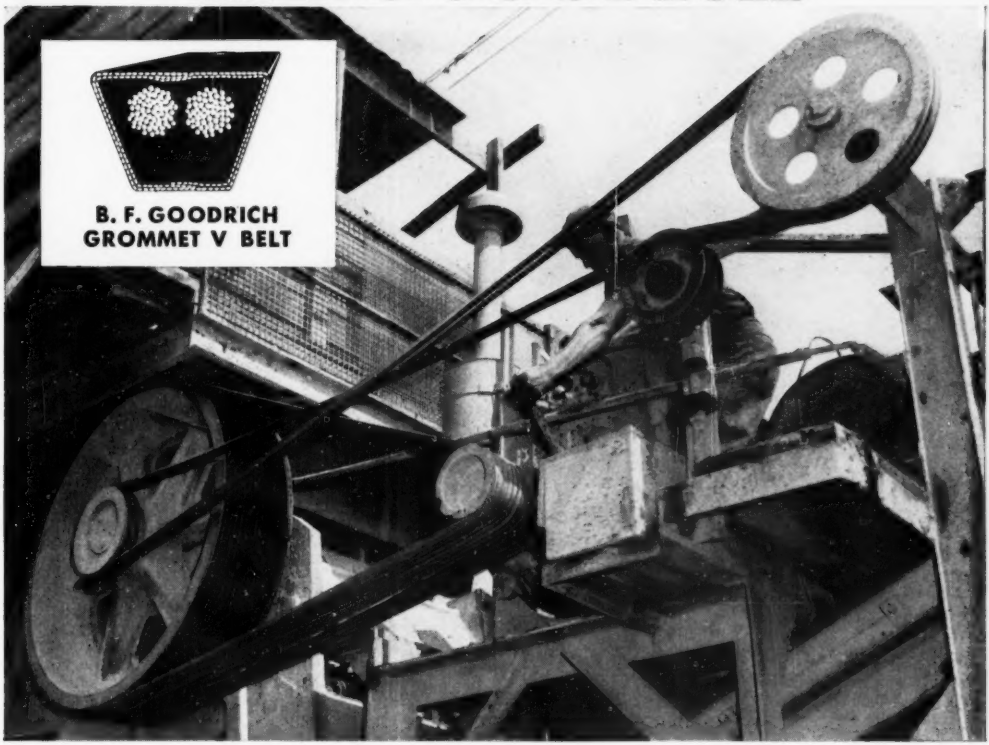

Three years at hard labor for B. F. Goodrich grommet belts

B. F. Goodrich grommet V belts cut costs 20 to 50%

POUNDING action of this machine put terrific shock and strain on the V belts. Belts are outdoors, have to stand rain, dust and dampness. When belts wore out, work stopped—costs went up by the minute.

Then a B. F. Goodrich man suggested using B. F. Goodrich grommet V belts. When the picture above was taken, the grommet belts had been in use 3 years, and looked good for a lot more service. BFG grommet belts look the same as ordinary belts but, because they are made in an entirely different way, grommet belts stand more shocks and heavier loads than any other kind. Here's why:

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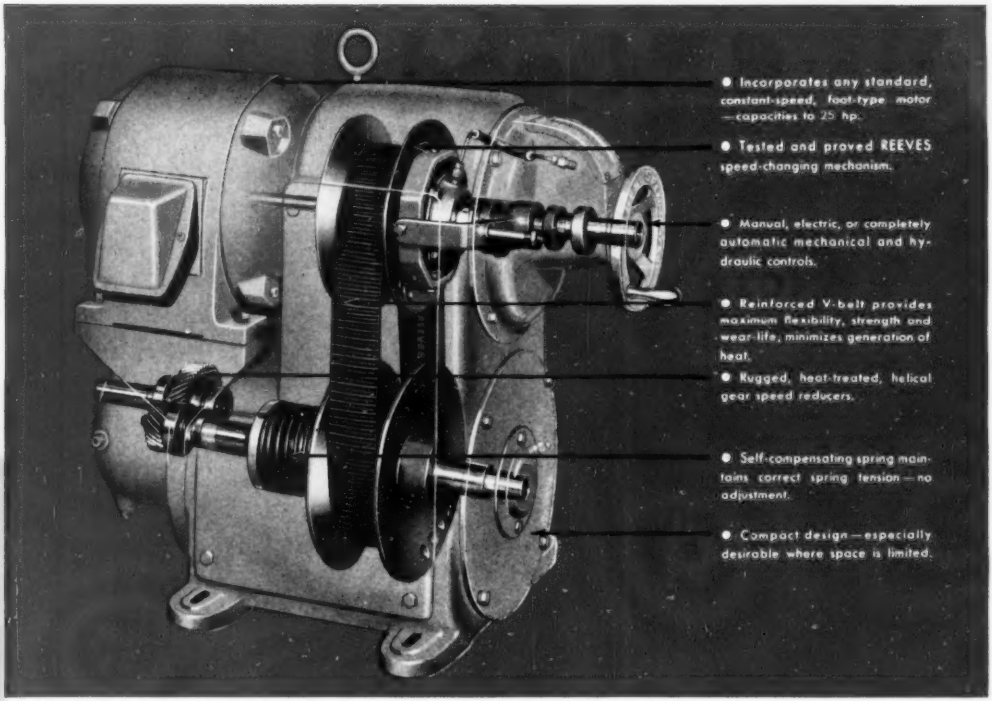
Concentrated cord strength—All of the cord material in a B. F. Goodrich grommet multiple-V belt is *concentrated* in twin grommets, positioned close to the driving faces of the pulley. No layers of cords to rub against one another and generate heat; cord and adhesion failures are reduced.

Better grip, less slip— Because a grommet is endless, a grommet V belt is more flexible, grips the pulleys better. Size for size, grommet multiple-V belts will give ⅓ more gripping power, pull heavier loads with a higher safety factor.

Only B. F. Goodrich has the grommet!— No other multiple-V belt is a grommet V belt (U. S. Patent No. 2,233,294). Now available in C, D and E sections. See your local B. F. Goodrich distributor. *The B. F. Goodrich Company, Industrial & General Products Division, Akron, Ohio.*

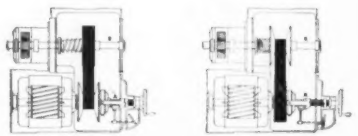
Grommet V Belts BY
B.F.Goodrich
RUBBER FOR INDUSTRY


● Incorporates any standard, constant-speed, foot-type motor —capacities to 25 hp.
● Tested and proved REEVES speed-changing mechanism.
● Manual, electric, or completely automatic mechanical and hydraulic controls.
● Reinforced V-belt provides maximum flexibility, strength and wear-life, minimizes generation of heat.
● Rugged, heat-treated, helical gear speed reducers.
● Self-compensating spring maintains correct spring tension — no adjustment.
● Compact design — especially desirable where space is limited.

Everything's built in—

and built to give your machines trouble-free, stepless speed adjustability in the

REEVES Vari-Speed Motodrive®



Minimum Speed Position — Maximum Speed Position

REEVES Vari-Speed Motodrive utilizes proved REEVES operating principle of a V-belt driving between two pairs of cone-shaped discs which are adjustable to form an infinite number of driving and driven diameters. Discs are mounted on parallel shafts. One shaft receives power at constant speed from motor —other delivers power at infinitely adjustable speed to gear reducer from which desired speed is transmitted to driven machine.

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Be sure you're getting maximum lap resistance when you buy

One way to be perfectly sure that any cover has the lap resistance you need is to try it on your work. Before you do this, however, you should know about a laboratory test that accurately predicts the kind of performance you'll probably get.

Research men at Armstrong worked out this test to measure the relative lap resistance of various roll covers. It's a simple test that shows in minutes what normally would take months to learn in a mill. Although it's fast, mill experience has proved its remarkable accuracy.

Here's how this test works. First, the test cot is put on a frame section from which scavenger roll and clearer board have been removed. The frame is then speeded up to many times normal.

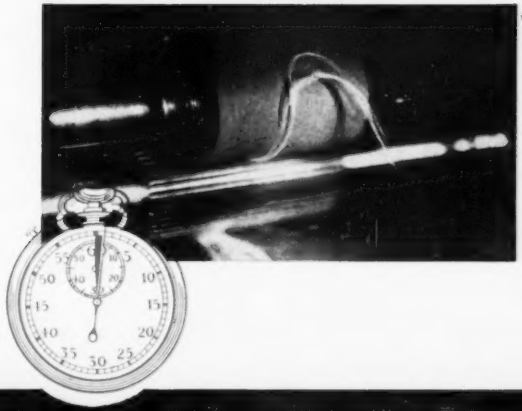
Next, the technician breaks an end and checks with his stop watch how long the cover lets the end run free. The longer the end runs free, clearly, the better chance it has in the mill of dropping to the scavenger roll. It is obvious, too, that the longer a cover lets the end run free, the better the lap resistance of that particular cot.

In thousands of such tests against the stop watch, Armstrong's Accotex® Covers consistently prove that they have more lap resistance than any other cover tested. They have proved their outstanding lap resistance also in actual service, as mill after mill can testify.

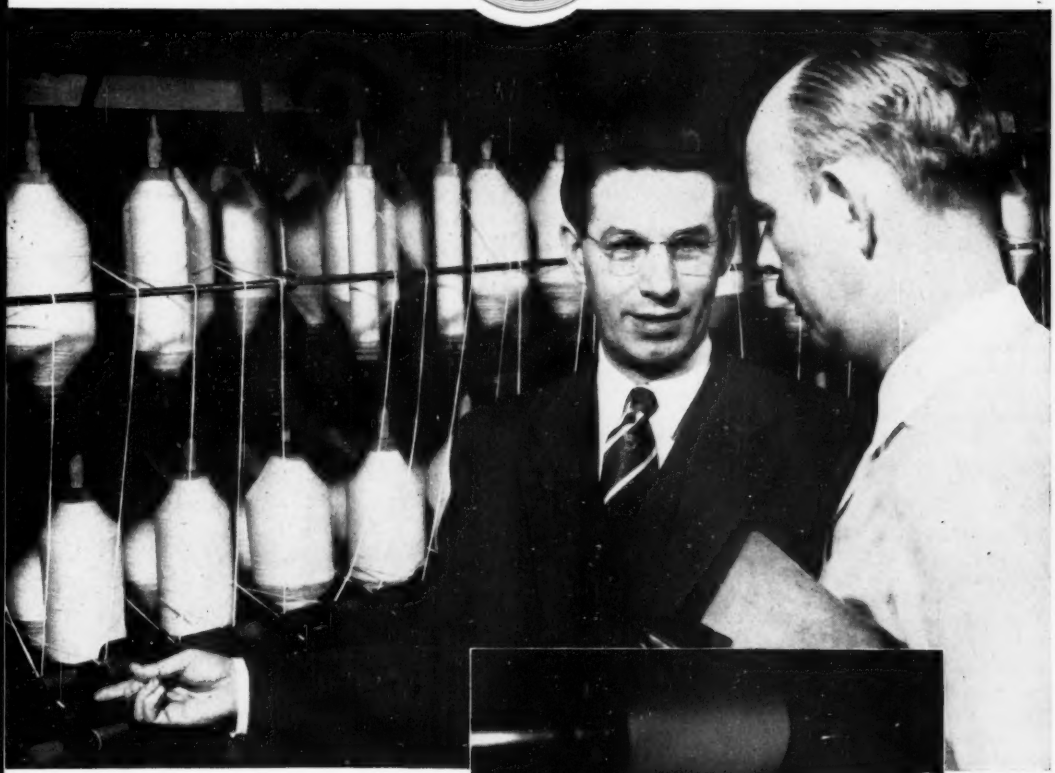
There is a complete line of these lap-resistant covers, each made with the patented Armstrong "electrolyte" formula. Whether you spin cotton, wool, synthetics, or blends, your Armstrong representative can suggest the right Accotex Cover for your work.

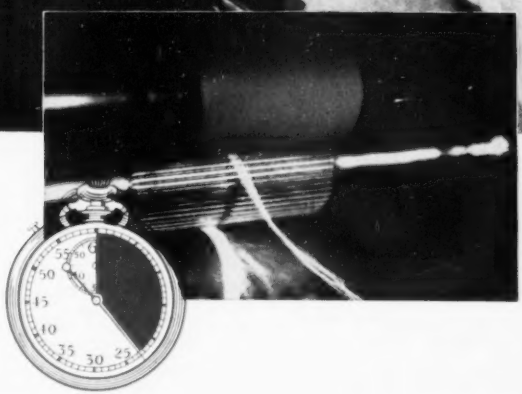
Call him today or write Armstrong Cork Co., Textile Products Department, 3604 Arch St., Lancaster, Pa. Available for export.

ARMSTRONG'S ACCOTEX COTS



This cot laps: Natural, microscopic moisture layers on fiber and cot each contain electric charges. When pressed together, the attraction between the two moisture layers has the effect of adhering fibers to cot, causing broken ends to lap up quickly.





This cot resists lapping: Certain electrolytes put in patented Accotex Covers neutralize electric charges in moisture layer on the cot. This destroys the adhesive effect of the two moisture layers and lets broken ends drop down onto the scavenger roll.

Through the years . . .

- TEXTILE MACHINERY MODELS CHANGE
- MAKES OF EQUIPMENT ARE DISCONTINUED
- MANUFACTURERS CEASE OPERATIONS

This changing process leaves in the textile industry an accumulation of millions of dollars worth of fine, well made production equipment, capable of years of economical operation . . . capable, however, only so long as it is properly maintained.

To aid the industry in the problem of maintaining this equipment, Southern States Equipment Corporation has, through the years, offered a complete engineering and fabrication service on replacement parts.

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In addition, Southern States is prepared to fabricate a surprising percentage of the replacement parts required to keep your preparatory equipment operating at top efficiency.

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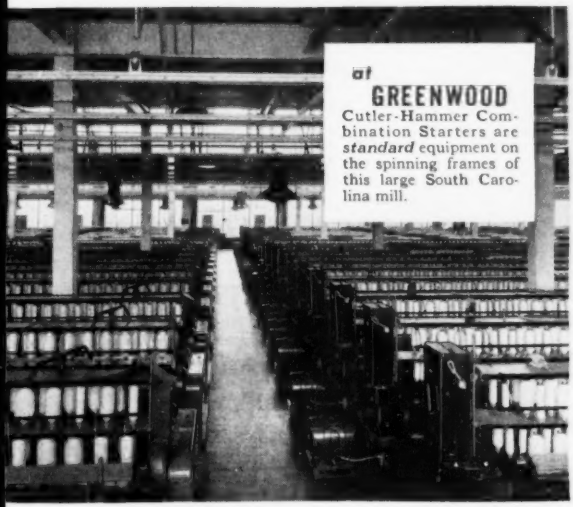
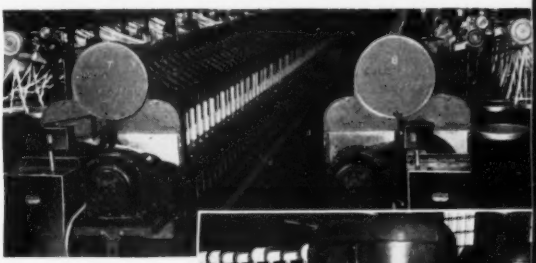
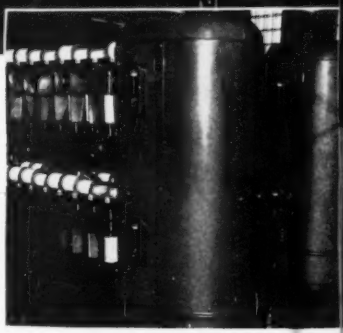
MOTOR CONTROL FOR THE TEXTILE INDUSTRY

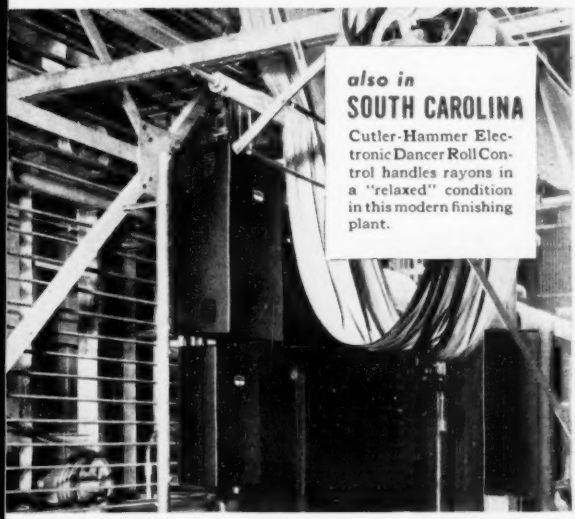


at
GREENWOOD
Cutler-Hammer Combination Starters are *standard* equipment on the spinning frames of this large South Carolina mill.





for
WAUMBEC
at Manchester, N. H. Cutler-Hammer Pushbutton Manual Starters on uptwisters and Primary Resistor Type Magnetic Starters on roving frames. Cutler-Hammer control also used on looms and spinning frames in this great mill.



also in
SOUTH CAROLINA
Cutler-Hammer Electronic Dancer Roll Control handles rayons in a "relaxed" condition in this modern finishing plant.

Too important to be left to chance

Men who *know* textile production costs are careful buyers of motor control equipment. They know a single work stoppage caused by faulty control can easily cost more than the entire purchase price of the control. In consequence, they do two things. First, they compare *all* makes of motor control to determine which is most dependable. Second, they specify this make by *name* on every purchase order.

Cutler-Hammer Motor Control is the natural choice of men who know dependability in motor control is too important to be left to chance. They quickly find Cutler-Hammer dependability is not a mere competitive claim but a *fact* that can stand out clearly in a mill's production records to reflect favorably on their own ability and good judgment. They also find that Cutler-Hammer dependability is not an occasional happenstance... that it is the earned advantage of the longest and most intensive specialization in motor control engineering... that it can safeguard *every* control need from the simplest starter to the most complex electronic equipment.

You too will find it pays to insist on Cutler-Hammer Motor Control and refuse all substitutes. An adequate network of Authorized Cutler-Hammer Distributors throughout the textile manufacturing areas insures prompt attention and supply. **CUTLER-HAMMER, Inc., 1456 St. Paul Avenue, Milwaukee 1, Wisconsin.**

CUTLER-HAMMER LOOM SWITCH

for fewer shutdowns, greater production, easier maintenance

Pushbutton operation—an achievement for this type of starter. Stop button can be padlocked.

Stronger, smaller, drawn steel case. Unique welded-steel mounting pedestal available to create a *complete* assembly with unparalleled resistance to mechanical shock.

Lint-proof enclosure—close fitting cover (even around pushbutton well) limits entrance of lint and dust.

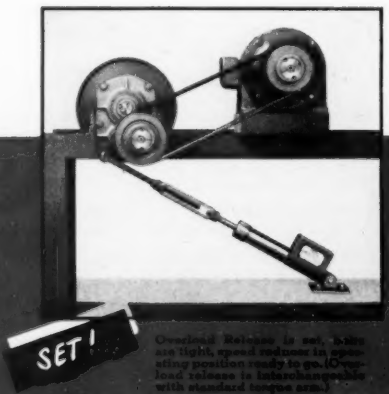
Service proven, positive make, quick break operating mechanism built on *steel* framework.

"Out in the open" contacts for quicker inspection and easy renewal on *the job*. Most dependable overload protection—famous Cutler-Hammer eutectic element type—prevents unnecessary shutdowns without sacrifice of *positive* motor protection.

Vibration resistant. Mechanism "floats" in truly effective *live rubber* mounting bushings.

CUTLER-HAMMER
MOTOR CONTROL
C-H

NEW!



Overload Release is set. Belts are tight, speed reducer in operating position ready to go. (Overload release is interchangeable with standard torque arm.)

Overload governor has moved piston at Tri-Matic to plunge lengthwise through the unit, loosening belts, cutting off power, sending out alarm.

Now . . . another great development by Dodge . . . that provides instant and positive protection for driven machines, motors, and the famous Torque-Arm Speed Reducer itself! The new Dodge Tri-Matic Overload Release prevents breakdowns, avoids expensive repairs, insures your production against costly interruptions.

Here's a worthy companion to other Dodge achievements in power transmission machinery, such as Taper-Lock Sheaves, Dodge-Timken Bearings, Rolling Grip and Diamond D Friction Clutches. Dodge Torque-Arm Speed Reducers, which have brought dependable speed reduction to industry's machines at great savings in cost, are available in two series—Single Reduction and Double Reduction—with capacities from 1 hp to 43 hp, speeds from 12 to 330 rpm.

Write for special data on Torque-Arm Speed Reducers and the new Tri-Matic Overload Release.

CALL THE TRANSMISSIONEER

your local Dodge Distributor. Factory trained by Dodge, he can give you valuable assistance on new cost-saving methods. Look for his name under "Power Transmission Equipment" in classified phone book.

DODGE MANUFACTURING CORPORATION, 3500 Union St., Mishawaka, Ind.

DODGE

Tri-Matic Overload Release

FOR THE FAMOUS DODGE TORQUE-ARM SPEED REDUCER

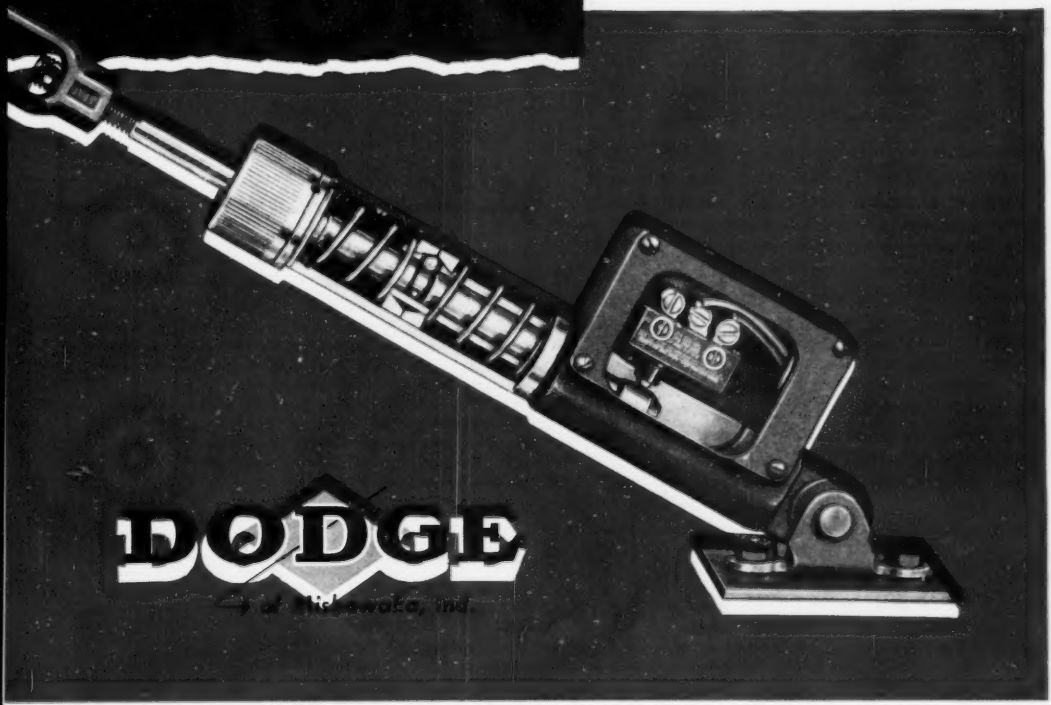
1. ***LOOSENS THE BELTS***
2. ***CUTS OFF POWER***
3. ***GIVES A WARNING***

Protects Your Machines

Mechanically . . Electrically

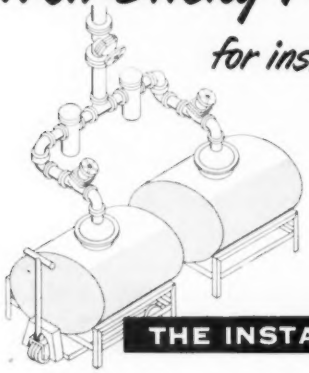
POSITIVELY!

- The Dodge Tri-Matic Overload Release is a simple, positive acting unit that replaces the standard torque arm that is regularly furnished with the Dodge Speed Reducer. (The two are interchangeable.)
- Pressure exerted by an excessive load causes a piston to move lengthwise through the unit, activating the mechanism instantly.
- This movement shortens the torque arm, loosens the belts and cuts off current simultaneously.
- A warning system can be hooked up to the micro switch of the Tri-Matic—to activate bell, siren or light.
- The Tri-Matic is calibrated for adjustment to the load conditions of any job. It can be set to act at any desired load up to the reducer's maximum capacity.
- It is easy to reset the Tri-Matic. Just pull the speed reducer back into position. This automatically cocks the release mechanism.
- The Dodge Tri-Matic Overload Release is available from distributors' stocks in sizes for all Dodge Torque-Arm Speed Reducers —in either single or double reduction series.



Do Your Valves Fit Your Job This Well?

... on Sticky Fluid for instance



THE INSTALLATION

Crane Diaphragm Valves on air pressurized liquid latex piping service in paint factory, Adams & Elting Division, The Glidden Company, Chicago.

VALVE SERVICE RATINGS

OPERATION:
Easy - No sticking

SUITABILITY:
Fluid can't get into bonnet

MAINTENANCE COST:
None to date - More indicated

SERVICE LIFE:
No sign of wear

OPERATING RESULTS:
Production delays stopped

PRICE:
In line - No premium

AVAILABILITY:
Stock item in Crane line

THE HISTORY

Conventional valves formerly used in this service were hindered by exposure of working parts to the line fluid. The sticky latex would accumulate in the bonnet and stem threads, freezing the stem, and making valve operation difficult or impossible. With 10 or more operating cycles required daily, the plant faced considerable valve trouble and maintenance expense.

Both trouble and maintenance cost were completely eliminated by replacing with Crane Diaphragm Valves. Their fully sealed bonnet keeps the latex out of working parts. They operate smoothly and do not freeze or stick. So well is the customer satisfied with Crane Diaphragm Valves, more have been ordered for new latex lines.

THE VALVE

Crane No. 1610 Iron Body Packless Diaphragm Valves featuring separate disc and diaphragm. Neoprene diaphragm acts as bonnet seal only; isn't pinched or stressed when valve is closed. Conventional type seating makes positive closure even should diaphragm fail. High flow capacity Y-pattern body has non-restricting interior design. Available unlined or fully Neoprene lined. Consult your Crane Catalog or Crane Representative.

The Complete Crane Line Meets All Valve Needs. That's Why
More Crane Valves Are Used Than Any Other Make!

CRANE VALVES

CRANE CO., *General Offices:* 836 S. Michigan Ave., Chicago 5, Illinois
Branches and Wholesalers Serving All Industrial Areas

VALVES • FITTINGS • PIPE • PLUMBING • HEATING

Now, it's a case of better fabrics . . . faster. Standard's quality products and technical know-how can help you meet government standard specifications. Here's a list of Standard product uses from carding right on through to finishing.

For faster, better carding of cottons, rayons and synthetics, use Standapol and Stantex products.

For faster and better desizing, use Stantex Penetrator 40.

Improve your sulphuric acid sour by using Stantex Penetrator 40.

Use Turpenol XXC in kier boiling, continuous boiling, and jig boiling to save time, improve quality and lower costs.

In Rodney Hunt slack soapers . . . use Pyrotex, a detergent that cleans in any kind of water at any temperature.

Mercerize with Mercetex 756 at any concentration up to 60° Twaddle for perfect lubrication and penetration. Mercetex 756 stores well in reclaimed Caustic and the wetting speed is just right.

Dyebath . . . Vats, Sulphurs or Directs, use Penetrator 111 and Sanforol 50D. Stop your scum and dye spots, and get good penetration.

For dispersing, retarding and leveling light and dark shades on difficult government fabrics, use Retardine and Retardine D.

Clean up your dyed goods by using Pyrotex, Stantex NR-2, and Standapon. Excellent detergency, stability at boil, stability in acids or alkalis, and stability in soft or hard water. Easily rinsible. Economical to use.

Finishing and Sanforizing . . . Standapol 16 and Sanforol 50. They give the correct hand and softness, have excellent sewing characteristics, and they will not injure the most delicate skin.

Write today for complete details on the process and Standard product in which you are interested.

STANDARD CHEMICAL PRODUCTS, Inc.

1301 JEFFERSON STREET, HOBOKEN, NEW JERSEY

Chattanooga, Tenn. • Paterson, N. J. • Providence, R. I. • Sunbury, Pa. • Sacramento, Calif.
Greensboro, N. C. • Leaksville, N. C. • Salisbury, N. C.

Manufacturer of: Pyrotex—Standapol*—Stanteosine—Retardine*—Standafin—Stantex* *Reg. U. S. Pat. Off.

Happy *Color Harmony* at home makes happier people at work

Here's the easy way to provide distinctive color schemes inside mill village homes . . . make them more attractive to tenants, more economical for you to maintain.

Let your employees color-style their own homes . . . with the Sherwin-Williams Style Guide and Color Companion.

This color service shows graphically what color goes with what . . . displays color harmonies for every taste. All combinations are approved by color authorities. Over 100 colors are available in Quali-Kote . . . the velvet-rich, washable paint that keeps maintenance costs down.

Most people who consult the Style Guide and Companion find color-styling so much fun and so *easy* that they want to do their own painting. Your employees will, too. *That's* easy . . . if you provide Quali-Kote in the colors of their choice. Specially formulated for commercial use, Quali-Kote flows on so freely, dries so fast, your employees can paint and use their rooms the same day.

Ask us how to make this color service available among your workers' families. It will put an end to discouraging standardization in decoration . . . give tenants new pride in their homes . . . save money for you. Write The Sherwin-Williams Co., Cleveland 1, Ohio. (Division Offices, Charlotte, N. C. and Boston, Mass.)

COVER THE EARTH

SHERWIN-WILLIAMS

INDUSTRIAL MAINTENANCE FINISHES

SAVE-LITE MILL WHITE • COLOR HARMONY FINISHES • MILL VILLAGE PAINTS

NAPHTOLATE SOLUTIONS

another member of the naphtol family...

Many of the more important Naphtols are now available in solution form.

These solutions have all the attributes of the parent Naphtols from which they are derived.

Naphtolate Solutions save time, labor, solvents and oil.

The practical advantages of Naphtolate Solutions are obvious.

Naphtolate Solutions are well worth investigating.

Our nearest office will supply the information.

GENERAL DYESTUFF CORPORATION

435 HUDSON STREET • NEW YORK 14, NEW YORK

BOSTON • CHARLOTTE • CHICAGO • PHILADELPHIA • PORTLAND, ORE. • PROVIDENCE • SAN FRANCISCO

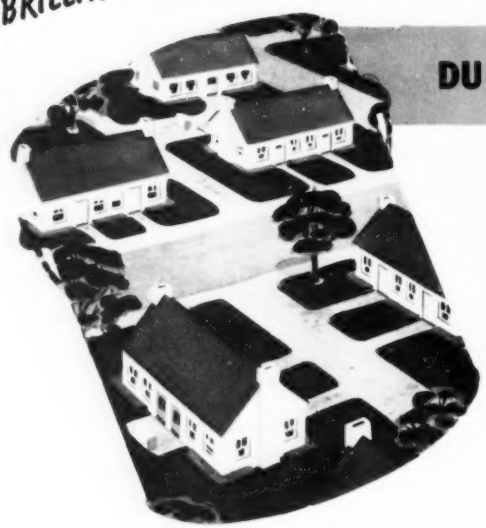
For mill villages . . .

New Du Pont
FLOW KOTE WALL PAINT
REG. U. S. PAT. OFF.

This amazing rubber-base wall paint is perfectly suited to mill-village interiors. Low-cost FLOW KOTE glides on quickly without streaks, safely seals wallboard, aged bare plaster, dry wall construction. FLOW KOTE dries in 30 minutes to a beautiful, velvet finish that's simple to keep clean because it's *super-washable!* Can be applied by brush or roller, has no unpleasant odor.

FLOW KOTE comes in a rich variety of deep-tone and pastel colors that provide smart-looking beauty and lasting durability. No wonder it's the talk of the paint world!

BRILLIANT BEAUTY! LASTING PROTECTION! LONG-TERM ECONOMY!



DU PONT "40" HOUSE PAINT

Du Pont "40" Outside White saves you money right from the start. It goes on fast and easy . . . gives solid hiding and exceptional coverage per gallon. This adds up to less time on the job and lower application costs.

And what is equally important, Du Pont "40" is chemically engineered to *stay* intensely white *through years of exposure!* Your village will look better longer, and many maintenance problems will be minimized. When the time comes for repainting, "40" gives you a surface ready to take a new coat with little preparation.

Why not let a Du Pont maintenance painting expert go over your mill-village requirements with you? Write E. I. du Pont de Nemours & Co. (Inc.), Finishes Division, Wilmington, Delaware.

DU PONT
REG. U.S. PAT. OFF.

PAINTS

CHEMICALLY ENGINEERED
TO DO THE JOB BETTER

150th Anniversary

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

"Tycol Acylkup keeps bearings running cool... does not emulsify with water"

That's right! Tycol Acylkup Grease withstands heavy unit pressures . . . resists emulsification with water. It is easily applied by grease gun or central system.

Further, Tycol Acylkup Grease contains a high grade paraffin base cylinder oil that steps up bearing efficiency and assures increased bearing life. Protection against wear is long-lasting.

Your nearest Tide Water Associated Office will be glad to give you complete information. Call or wire today.

TYCOL
INDUSTRIAL LUBRICANTS

Boston • Charlotte, N. C. • Pittsburgh
Philadelphia • Chicago • Detroit
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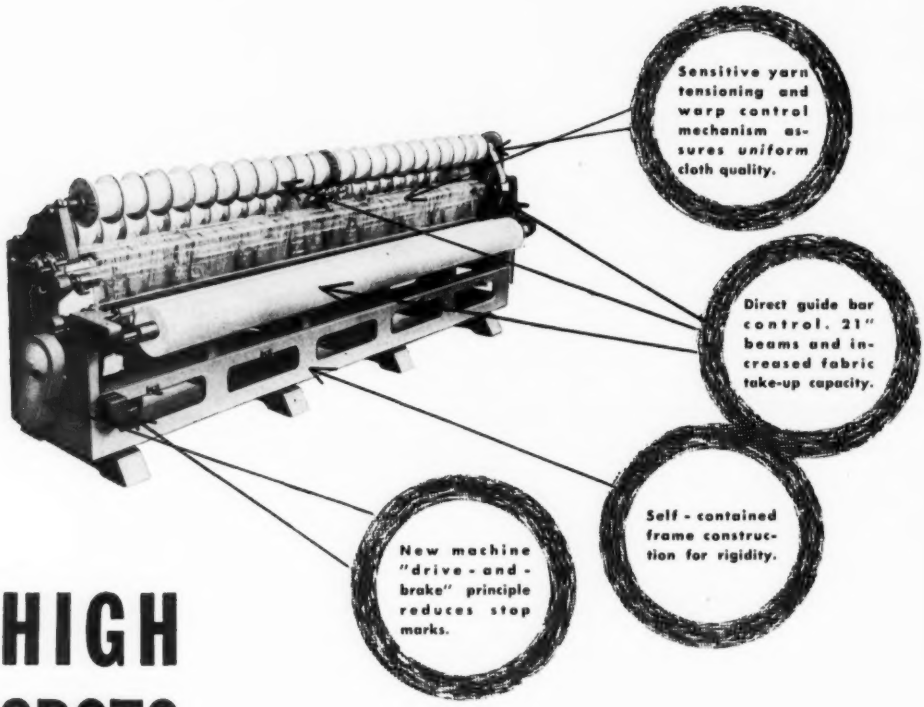
TIDE WATER ASSOCIATED OIL COMPANY
17 BATTERY PLACE - NEW YORK 4, N.Y.

SEND FOR A FREE COPY OF "TIDE WATER ASSOCIATED LUBRICANIA"


Sensitive yarn tensioning and warp control mechanism assures uniform cloth quality.
Direct guide bar control. 21" beams and increased fabric take-up capacity.
Self - contained frame construction for rigidity.
New machine "drive - and - brake" principle reduces stop marks.

HIGH SPOTS

of the most **advanced design tricot machine** *made...*

Mayer high speed tricot machine

Obtain up to 30% increase in production! Increased RPMs actually mean a smaller long term investment. Light weight aluminum leverage arms **speed up** knitting motions.

Hofmann's Mayer Tricot Loom is **precision engineered** for versatility, smooth operation and maximum efficiency.

Watch the finest quality tricot fabrics come out of your mill after your Mayer Tricot Loom goes into it!

2 or 3 guide bars. 168" width. 22 to 34 gauge. Cut-Presser-Pattern bar (optional).

FOR DEMONSTRATION CONTACT:

Alfred HOFMANN and Co.
635 59th Street West New York, N. J.

NYC phone: LOngacre 5-5771 NJ Plant phone: UNion 3-1300

Foster No. 51A-47 T
AlSiMag No. GE-24723

Foster No. 51A-24
AlSiMag No. GE-22558

ALSIMAG® STOPS WEAR ON FOSTER BASE PLATES

FOSTER ADOPTS ADDITIONAL ALSIMAG GUIDES AS STANDARD

Foster Base Plates for 51A Slubcatcher were formerly made of hardened alloy steel. As speeds were increased and more worsted and synthetic yarns were processed, many mills found that the base plates quickly wore beyond use.

AlSiMag guides have solved other wear problems for Foster. They ordered sample Base Plates of AlSiMag 192. They were successful. Production quantities were then ordered. Now, after two years of use, these AlSiMag 192 Base Plates have proved beyond doubt that they have the dimensional accuracy as well as the extra long life that is required for this exacting requirement.

Foster has now adopted AlSiMag Base Plates as 100% standard on all 51A Slubcatchers. Their customers obtain the long continuous runs and precision winding always associated with Foster Machines.

We will be glad to send you sample AlSiMag Base Plates on request, without charge. Test them in your own mill and let them prove they are the answer to all wear problems.

BASE PLATES AND GUIDES

Foster Machine Co., Westfield, Mass., carries these AlSiMag Base Plates and guides in stock for immediate shipment. They also may be ordered from American Lava Corporation, Chattanooga 5, Tennessee, for shipment after normal production time.

FOSTER MODEL 102 CONE WINDER

Foster has previously standardized on AlSiMag "where excessive wear has been experienced in using other materials." These are:

Guide Button
for Foster Model 75
Straight Cone Winder.
Foster No. L-2381
AlSiMag No. GS-17792

Guide Tip
for Foster Model 75
Pineapple Cone Winder.
Foster No. L-1688-B
AlSiMag No. GE-11985

Guide Sleeve
for Foster Model 76
Nylon Sizing Machine.
Foster No. 76-668
AlSiMag No. GE-16869

SAMPLES ON REQUEST

AMERICAN LAVA CORPORATION

50TH YEAR OF CERAMIC LEADERSHIP

CHATTANOOGA 5, TENNESSEE

OFFICES: METROPOLITAN AREA: 671 Broad St., Newark, N. J., Mitchell 2-8159 • PHILADELPHIA, 1649 North Broad St., Stevenson 4-2823
SOUTHWEST: John A. Green Co., 6815 Oriole Drive, Dallas 9, Dixon 9918 • NEW ENGLAND, 1374 Massachusetts Ave., Cambridge, Mass., Kirkland 7-4498
LOS ANGELES, 232 South Hill St., Mutual 9076 • CHICAGO, 228 North LaSalle St., Central 6-1721 • ST. LOUIS, 1123 Washington Ave., Garfield 4939

Industrial fabrics, like the spray-booth curtain above, are fire-safe, tough, rot- and mildew-proof when made with L·O·F Fiber·Glass. Also excellent for other fabrics.

Continuous-Fiber textile yarn—150-series. Packaged for all textile looms, braiders and twisting machines. Uniform in quality and fiber diameter. Will not shrink or stretch. Exceptional tensile strength . . . 250,000 lbs. per square inch.

L·O·F Fiber·Glass opens way for profitable, new textile applications

Libbey·Owens·Ford is ready *now* to work with you, *your way*, in developing them

Let's join forces and explore the many possibilities for new applications of L·O·F Fiber·Glass in the textile field.

Libbey·Owens·Ford is learning the methods, language and techniques of the textile industry to better work with you, *your way*, in applying its wealth of glass knowledge to textiles. We feel sure that your textile experts and our glass technicians, working together, can come up with some interesting and profitable developments.

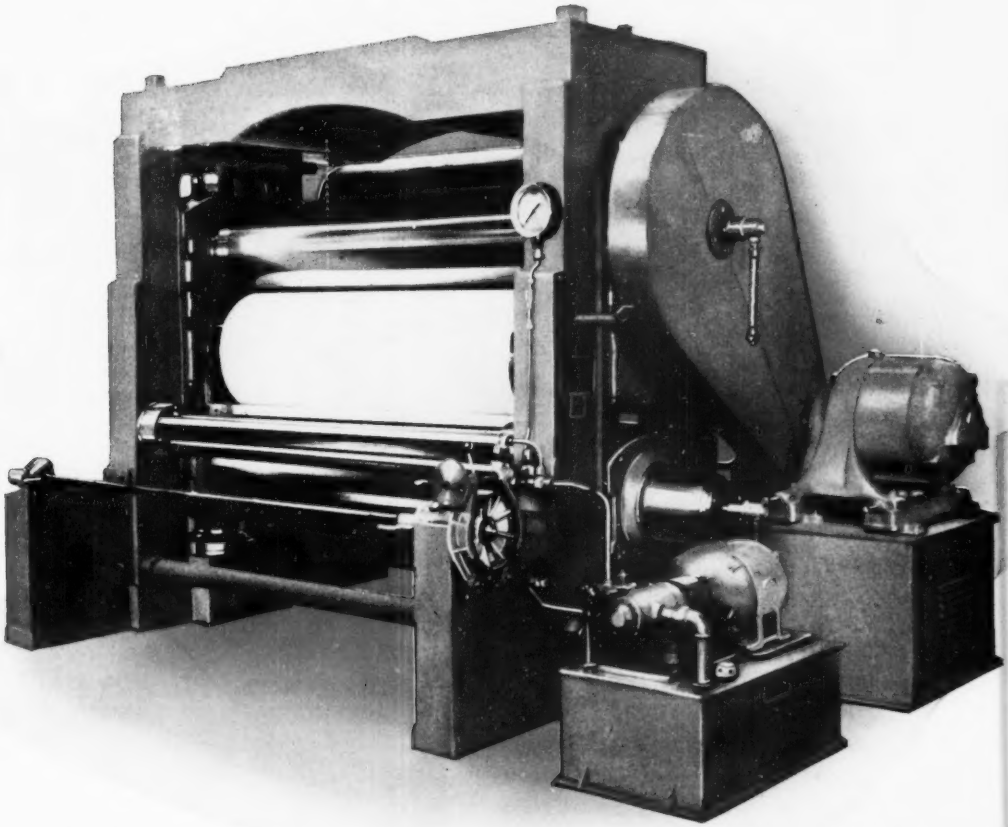
Perhaps your company is already familiar with the unique advantages of fibrous glass for textile applications. If so, look into Libbey·Owens·Ford as a new source for first-quality Fiber·Glass, ready and willing to work with you.

For technical data, or consultation on Fiber·Glass uses in industrial and other fabrics, call your local L·O·F office (branches in 24 major cities). Or write, wire or phone Libbey·Owens·Ford, Dept. F·G 1842, Nicholas Bldg., Toledo 3, Ohio.

LIBBEY·OWENS·FORD GLASS COMPANY
FIBER·GLASS DIVISION

L O F FIBER·GLASS

FIBER·GLASS



RUGGED DEPENDABILITY

Nowhere does massive sturdiness pay off in satisfaction more than in a heavy-duty calender. The V.V. 80 Ton Hydraulic Calender is well known to the trade for its rugged dependability. Here's why:

In design, workmanship and materials nothing has been overlooked. Heavy cast, box section frames are connected to cast iron and steel cross girts with close fitting, machined faces. Bearing guide slides for calender roll are machined for correct working surface.

Top and bottom rolls are chilled iron 16″ and 20″ in diameter—turned, ground and polished. Both are bored with chambers for steam heating. Intermediate roll, 22″ in diameter, is of selected, seasoned and bonded cotton, pressed on hammer-forged steel shaft with hammer-forged steel heads.

Bearings are heavy duty, spherical, roller type.

Lubrication is by a circulating oil system, giving a continuous flow from reservoir through bearings to pump and filtering unit, back to reservoir.

New design, using piston rings instead of packing, eliminates down time for repacking. Piston diameter has been enlarged to maintain 80 ton nip pressure with only 770 pounds per square inch oil pressure instead of 2000 pounds as previously required.

Totally enclosed, two stage hydraulic pump is directly connected to motor. Extremely large self-aligning spherical roller bearings mean a great saving of power, enabling a 25 h.p. motor to supply ample power to drive the machine at 75 yards per minute. Standard widths are 65″ and 70″.

VAN VLAANDEREN

You are invited to see this machine.

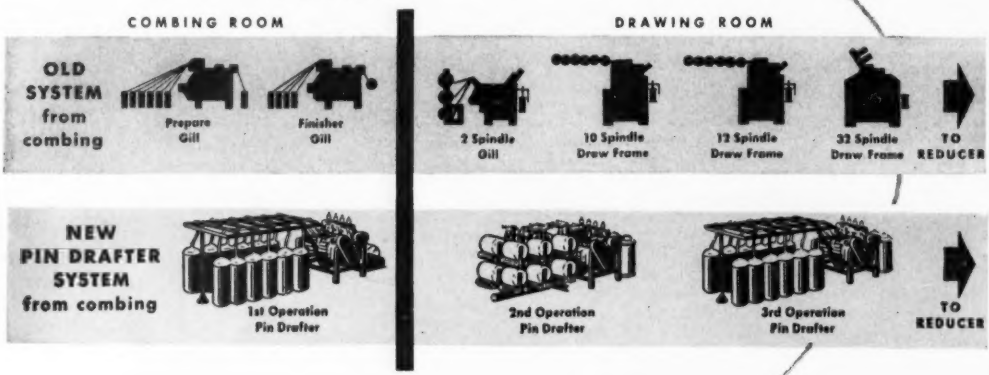
MACHINE COMPANY

370 Straight Street, Paterson 3, New Jersey

Cable address: VLAANDEREN, Patersonnj, U. S. A.

World's largest manufacturer of machines for processing modern fabrics

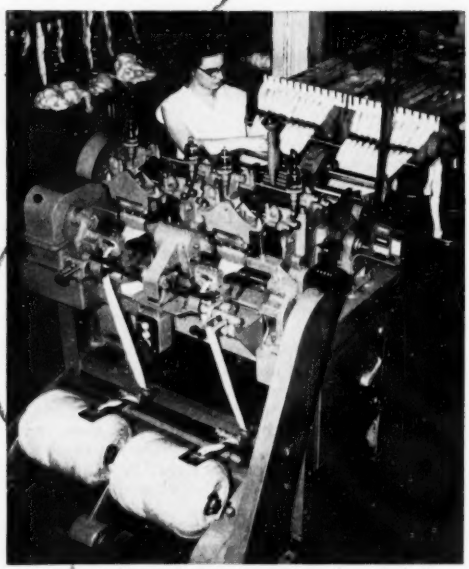
MORE YARN BETTER YARN ... with HALF as many operations!



SIX STEPS replaced by three! That's the story that comes from a production-minded mill where three operations performed by Warner & Swasey Pin Drafters added new profits in Combing and Drawing.

The results: A greatly improved yarn . . . better appearing, more even, and cleaner. And produced in greater volume with much less waste. The Pin Drafters' efficiency, based on the mill's own standards, is 93%!

And in today's tight manpower market the installation of Pin Drafters took on added importance because they required fewer operators.



Warner & Swasey Pin Drafter with single meche ball delivery in the Combing Room

WARNER & SWASEY
Cleveland
TEXTILE MACHINERY DIVISION

BRANCH OFFICES:
61 Rivulet St., North Uxbridge, Mass.
6910 Market Street, Philadelphia, Pa.
Candler Building, Atlanta, Ga.

YOU CAN PRODUCE IT BETTER, FASTER, FOR LESS . . . WITH A WARNER & SWASEY

DU PONT BLEACHERY SURVEY HELPS MILL INCREASE PRODUCTION 22%!

Production was off. Too many resists resulted in streaky dyeing. A bleachery survey, made by Du Pont specialists working closely with the mill operators, found the cause of the trouble—cloth tension was too high. Dyeing difficulties disappeared with installation of a device to relieve tension on the cloth . . . and an adjustment to the J-box drive increased production from 175 to 225 yards per minute —*a gain of over 22%!* Just another case where the combined experience of Du Pont and the textile mill can put operations on an economical, efficient basis.

A Bleachery Survey Can Help You Increase Production . . . Cut Costs

HERE'S WHAT WE DO:

- Study your processing techniques—steam, water and chemical consumption, cloth production and quality of finished goods.
- Analyze samples of your cloth for whiteness, whiteness retention, fluidity, absorbency and non-fiber content.
- Evaluate all data in the light of Du Pont's broad experience in textile bleaching.

BULK STORAGE FOR ECONOMY

If you need 5,000 lbs. or more of "Albone" 35 or "Albone" 50 Hydrogen Peroxide per month, you'll find a storage tank installation economical. For complete information on bulk storage, write in for booklet P 34-951.

HERE'S WHAT YOU GET:

- Valuable, on-the-spot suggestions for improving your processing techniques.
- A written report on the efficiency of your bleaching operation, which includes detailed suggestions on how you can increase production, cut costs and improve the quality of finished goods.

Du Pont Bleachery Surveys are conducted by specialists with wide experience in all phases of textile bleaching. These men spend from one to three days in your plant but do not interfere with production. This service is offered without charge to all users of peroxide in the United States. Send in the coupon below for complete information.

DU PONT PEROXIDES

FOR TEXTILE BLEACHING

Available in drums and tank cars { "Albone" 35 . . . Hydrogen Peroxide, 35% / "Albone" 50 . . . Hydrogen Peroxide, 50%

DU PONT

150th Anniversary

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

Mail this coupon now

E. I. du Pont de Nemours & Co. (Inc.)
Electrochemicals Department, Wilmington 98, Delaware

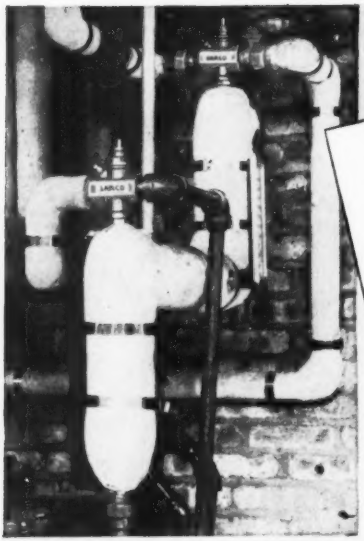
Please send me more information about the free Du Pont Bleachery Survey. I am bleaching____cotton____wool____ man-made fibers.

Name_____ Title_____

Firm_____

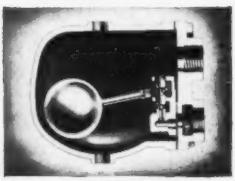
Street & No._____

City_____ State_____



Sarco makes simple, self-acting temperature controls assuring the desired Jacket cooling effect with minimum water consumption regardless of load variations.

Sarco type TR-40-L Cooling Control-Jacket water temperatures never too hot or too cold.



Sarco type FA Drain Traps have four pressure ranges to 750 psi. Sizes: ¾" or 1".

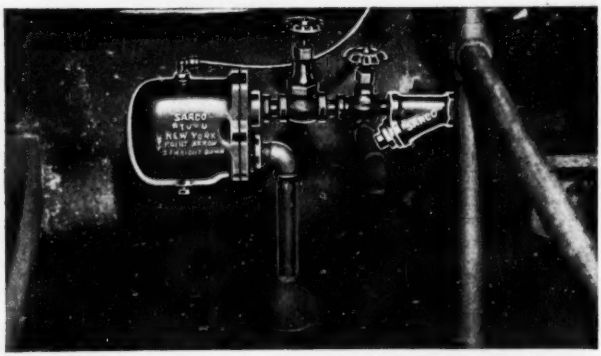
The true measure of effective air compressor capacity is the useful work done by your compressed air.

Measured by this yardstick, many compressor installations are very much oversize for the work they do.

Apart from poorly designed piping, the trouble usually lies in wet air, overcooling, undercooling, choked intake filters, etc. All of these things add up to expensive compressed air and high maintenance costs.

New Technical Bulletin, No. 5-CA, is designed to help users and would-be users of compressed air to get more work from their machines at less cost.

Write for your free copy today.



Sarco type FA compressed air trap automatically removes separated water from the bottom of the receiver. This greatly reduces the possibility of water being carried down the distribution lines to cause trouble in the tools or at the air nozzles. This trap is also used to drain water from separators and the low points of distribution lines.

343

SARCO COMPANY, INC.

EMPIRE STATE BUILDING, NEW YORK 1, N. Y.

Represented in Principal Cities

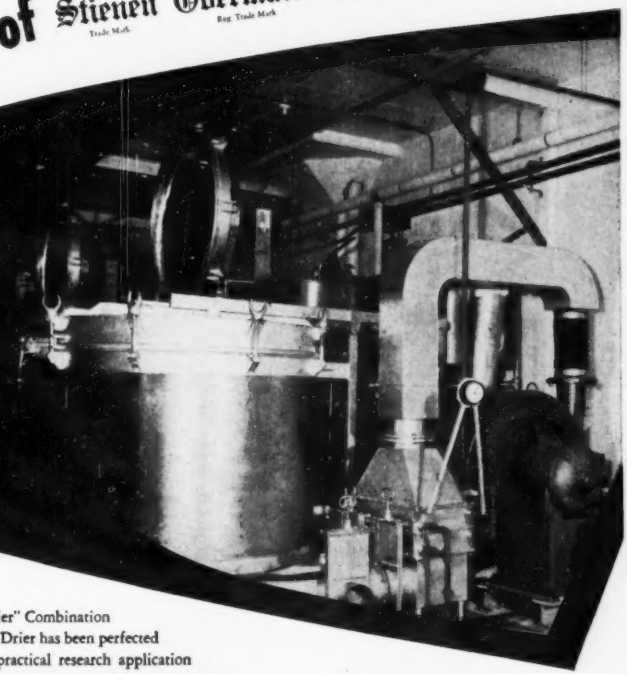
SARCO CANADA LTD., TORONTO 5, ONTARIO

MORE PROOF of Stienen Obermaier leadership

Trade Mark — Reg. Trade Mark

COMBINATION EXTRACTOR-DRIER*

Substantially reduces labor costs and cuts drying time in more than half.



The "Stienen-Obermaier" Combination High-Speed Extractor-Drier has been perfected after many years of practical research application and has been enthusiastically received by the entire trade. This new system of extracting and drying has cut the total drying time more than half over other systems and has proven a superior method to any other available for package drying. This Combination High-Speed Extractor-Drier can be utilized by even the smallest package dyer to great advantage.

The quick drying time means faster turnover of yarn in the dyehouse, eliminating bottlenecks, and cutting production time in half. This means half the required floor space and half the material carriers.

In actual operation, the material carrier is removed from the dyeing machine and placed in the extractor-drier. For average production, the entire operation is handled in this one machine requiring 1½ to 2 hours. For larger production, the same machine is used for extracting. Additional Port Driers are used to maintain the same high-speed drying results.

Submit your sample package to our laboratory and you shall receive exact data on your type of yarn.

The only complete laboratory unit made for sample dyeing, extracting and drying.

- **entirely electrically operated**
- **no steam required**

Stienen Obermaier — LEAD WITH THE

*PAT. PEND.

Standard Fabricators

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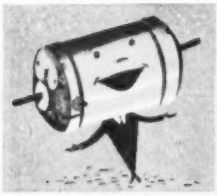
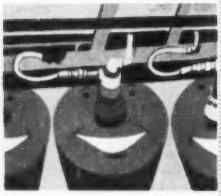
Obermaier & Cie.

Neustadt Weinstrasse, Palatinate, Germany

4 four ways Dow Corning Silicones save money in the Textile Industry





class H insulation

Class H electrical insulation made with Dow Corning silicones is remarkably resistant to the severe operating conditions common to the textile industry. Class H insulated motors withstand overloads, moisture, high ambient temperatures and humid, lint-filled, corrosive atmospheres. They outlast Class B motors by ten times or more; pay off many times over in maintenance savings alone.

Take spinning bucket motors, for example. Subject to acids, chemical fumes and heavy starting loads, their service life ranges from a few days to a few months. Rewinding with Class H insulation extends their life span up to 24 times. Maintenance costs drop off as much as 90%.

Savings over a three year period on spinning bucket motors alone in one plant amounted to over $20,000 a year.

DeCetex 104

DeCetex 104 gives synthetics and blends more durable water repellency than the best organic resin treatments—easier, faster, and at no increase in cost. DeCetex treated fabrics retain a spray rating of 90 to 100 after 10 dry cleanings; 80 to 100 after three 2-hour launderings.

Easily applied with conventional equipment, DeCetex 104 does not require washing or neutralizing. It contains no corrosive chemicals, and treated fabric remains odorless even after aging.

DeCetex 104 treatment imparts a high order of stain resistance and a soft, smooth "hand" with no increase in mark-off. Porosity, color; and color fastness are unchanged, except for a stabilizing effect on some materials.

silicone lubricants

Reduce production stoppages and high maintenance costs by eliminating bearing failure due to faulty lubrication. Dow Corning silicone oils and greases last at least ten times longer than the best high temperature organic lubricants, cut relubrication costs by as much as 90%.

Silicone lubricants are saving maintenance costs on such high temperature, high humidity bearing applications as tenter frames, conveyors, dryers and steam boilers. They have outlasted organic lubricants 10 to 1 in pipe line main stem valves; 50 to 1 in internal bearings in rolls and drying cans. For ball bearings operating at normal temperatures, Dow Corning silicone greases make permanent lubrication a practical reality.

Dow Corning Antifoam A

You'll get capacity production out of your finishing tanks and vats by adding Dow Corning Antifoam A to your solutions and using the space now being wasted on foam. That's because Dow Corning Antifoam A kills foam faster and in a wider variety of foamers than any other material known.

Production men have found it effective in many finishing solutions, including resin coatings, dye baths, fabric printing inks, and sizing materials ranging from starch to urea-formaldehyde. Only trace quantities are usually required to defoam some of the most violent and persistent foamers, even under continuous heat or agitation. One finisher, for example, defoams a 100-gallon tank of sizing solution with only 1/10 of an ounce of Antifoam A, or 3 parts per million.

That kind of efficiency makes Dow Corning Antifoam A the most economical as well as the most versatile and efficient defoamer on the market.

mail this coupon or call

our nearest branch office today!

DOW CORNING CORPORATION • DEPARTMENT BL-16
Midland, Michigan

Please send me the literature checked:

- ☐ Silicones Save Manpower
- ☐ Dow Corning Silicone Greases
- ☐ DeCetex Data Sheet
- ☐ Dow Corning Antifoam A

Name _____

Company _____

Address _____

City _____ State _____

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DOW CORNING CORPORATION
Midland, Michigan

Atlanta • Chicago • Cleveland • Dallas • Los Angeles • New York • Washington, D. C.

In Canada: Fiberglas Canada Ltd., Toronto • In Great Britain: Midland Silicones Ltd., London

for Quick, Thorough Removal

OF FLY AND LINT

INSTANT CONNECTION AND DISCONNECTION BY HAND—WITH NO TOOLS REQUIRED.

HANSEN

QUICK-CONNECTIVE

COUPLINGS AND BLOW GUNS

Socket
No. 5300

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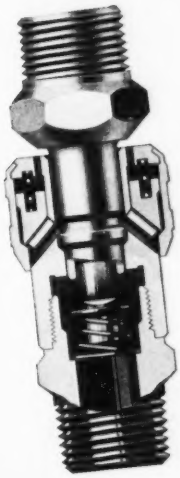
No. 5-PP19

Hose Clamp
No. HC-2P19

Air Blow Gun
No. 25

10" Extension Nozzle
No. 26



● Lint and fly can be quickly removed from carding machines, spinning frames and looms through the use of Hansen quick-connective couplings and an Air Blow Gun.

By equipping conveniently located air stations with Hansen quick-connective couplings, it is a simple matter to move from station to station with a short hose and the Hansen Air Blow Gun.

To connect the air hose at any station, you merely push the coupling plug into the socket—air is instantly and automatically available at blow gun.

To disconnect, just push back sleeve on coupling socket—plug immediately releases and flow of air is shut off at station.

Change-over from air blow gun to solvent spray cleaner takes only a few seconds.

Write for catalog and details.

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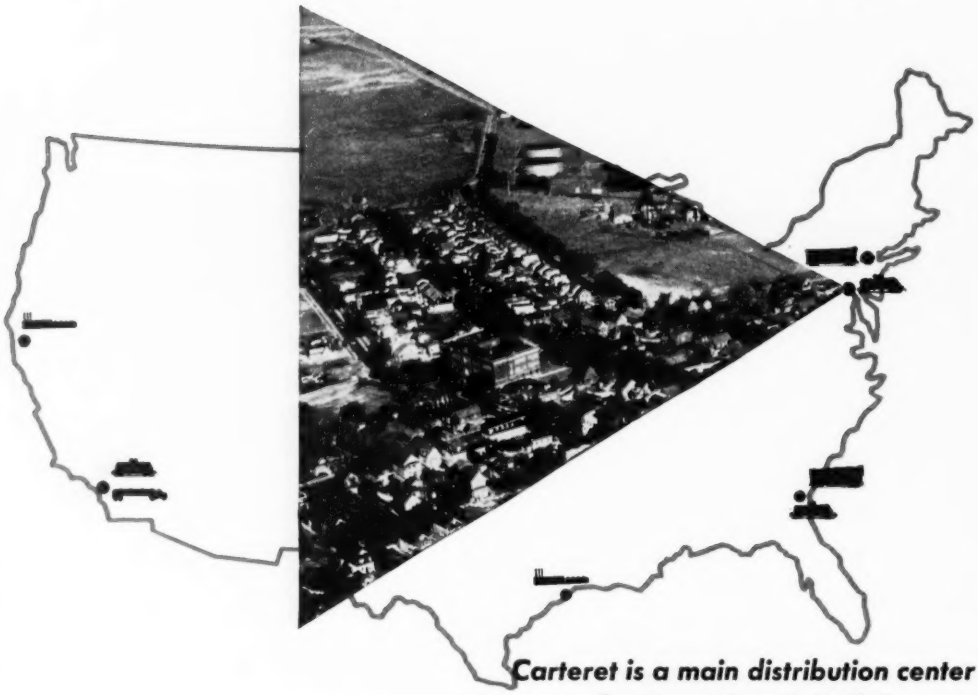

Carteret is a main distribution center for Dow Caustic Soda!

Dow's distribution facilities are conveniently located to serve you with dependable caustic soda delivery! Dow caustic soda solution is shipped from bulk tank terminals in Los Angeles, California; Carteret, New Jersey and Charleston, South Carolina. Caustic soda solid, flake and ground flake are shipped from terminals in Port Newark, New Jersey; Chicago, Illinois and Charleston, South Carolina. Dow caustic soda production is shipped to these distribution centers from three large plants—in Michigan, Texas and California. For superior service and nationwide distribution facilities . . . look to Dow for dependable caustic soda delivery!

wherever you are... *you're close to*

DOW CAUSTIC SODA

THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Atlanta • Cleveland • Detroit
Chicago • St. Louis • Houston • San Francisco • Los Angeles • Seattle
Dow Chemical of Canada, Limited, Toronto 1, Canada

DOW
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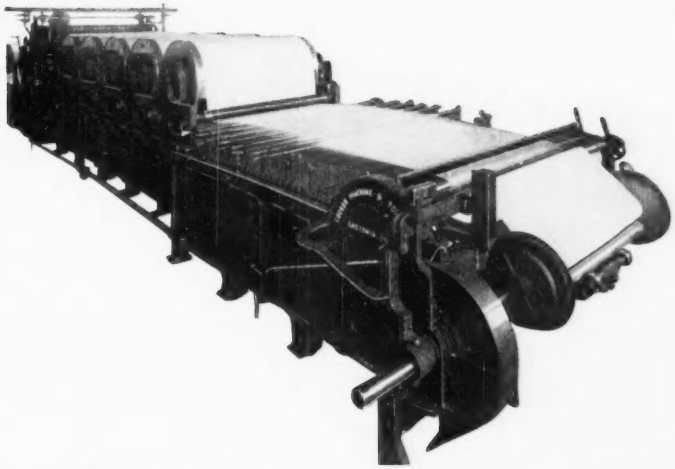
INDISPENSABLE TO INDUSTRY AND AGRICULTURE



The Cocker 9-Cylinder High Speed Slasher for cotton, spuns, filaments, and other type yarns.

The Most Modern Slasher in America

A new and exclusive feature on this slasher is the new type Cocker Friction, which produces hard loom beams and gives greater yardage of yarn per loom beam.

Another exclusive feature of this slasher is its Differential Friction Compensating Control which permits high speeds without heating of Friction. This is now and has always been the most modern slasher on the market . . . the first to use Rotary Packless Joints, Individual Traps on each Cylinder, Flexible Hose Connections, Stainless Steel Cylinders, Variable Speed DC Drive, and many other features which are now universally used.

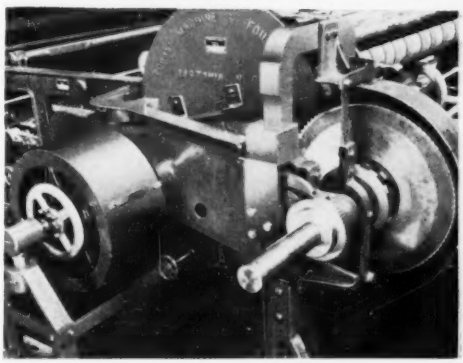
It will pay you to investigate the many valuable features of this most modern of all slashers.

1200 Pounds

Production

Per Hour

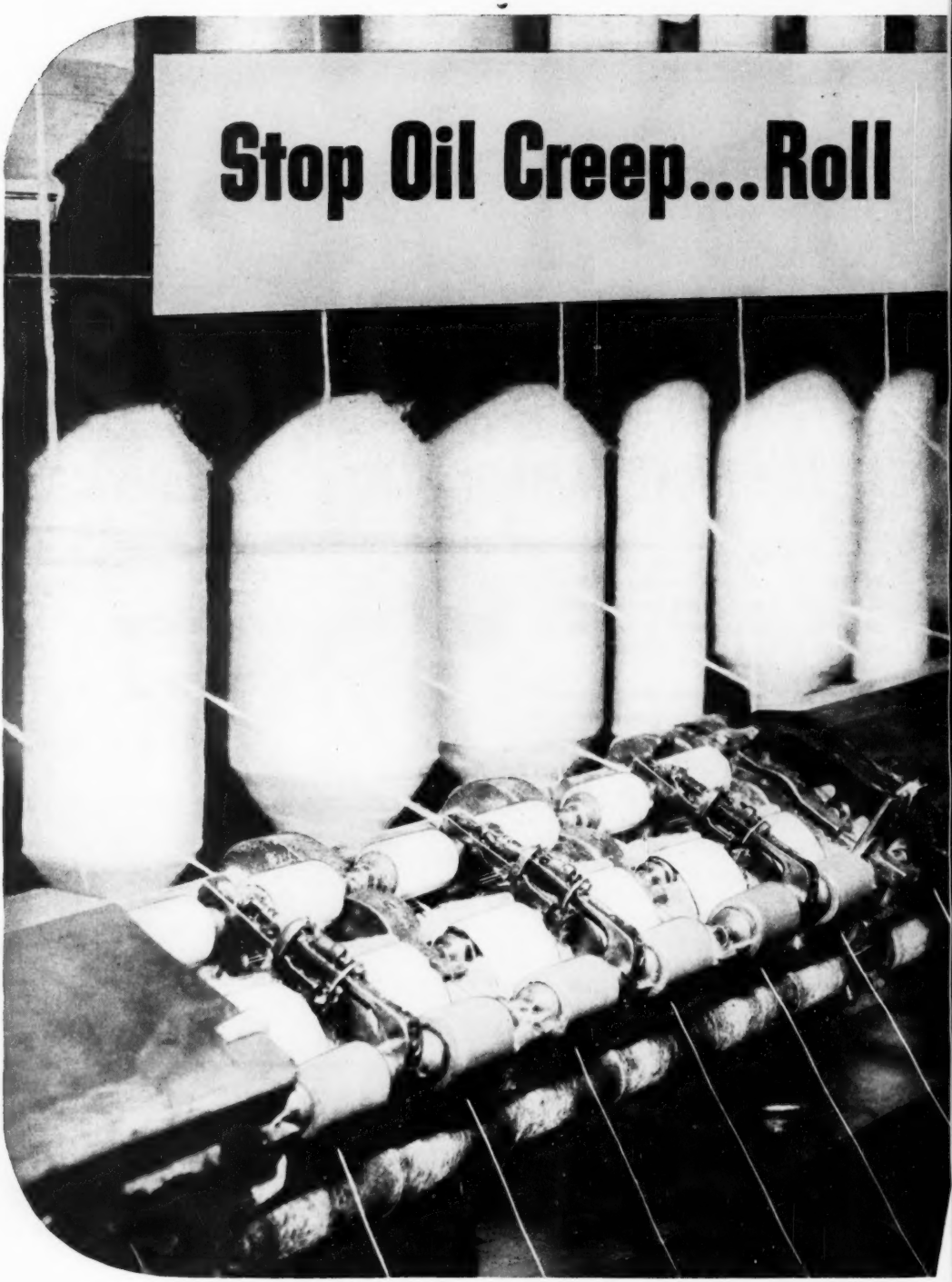
The New Cocker Friction



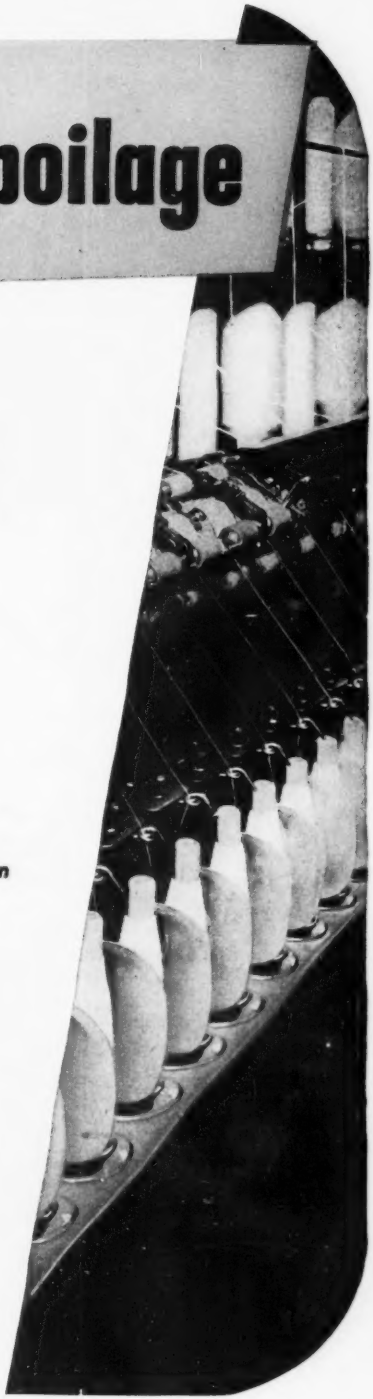
THE LEADER COCKER AROUND THE WORLD

Machine and Foundry Co., Gastonia, N. C.

WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT


Stop Oil Creep...Roll

Damage...Yarn Spoilage



...use SINCLAIR NO-DRIP

Here's a fine lubricant especially made to stay in place!
When you apply Sinclair NO-DRIP to necks and yokes, it stays right there, allows rolls to turn smoothly, without drag. This provides even draft and saves wear. And, because NO-DRIP will not creep or drip, yarn and roll coverings are protected from spoilage.
So, for uniformly finer yarn production, fewer roll replacements, and for lower maintenance cost, use NO-DRIP.

SINCLAIR TEXTILE LUBRICANTS

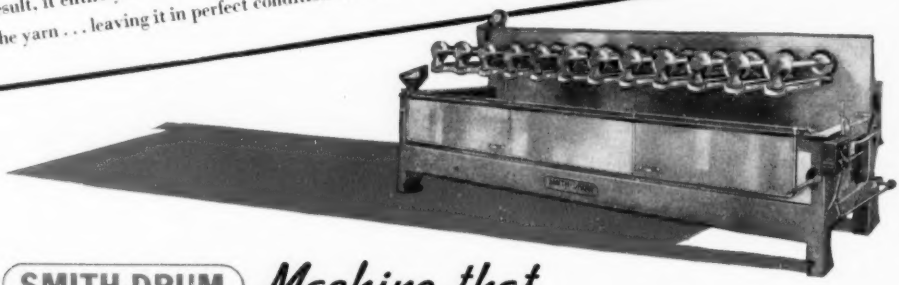
For full information or lubrication counsel write Sinclair Refining Company, 600 Fifth Avenue, New York City

. . . and there's ONLY ONE WAY to Prevent it.

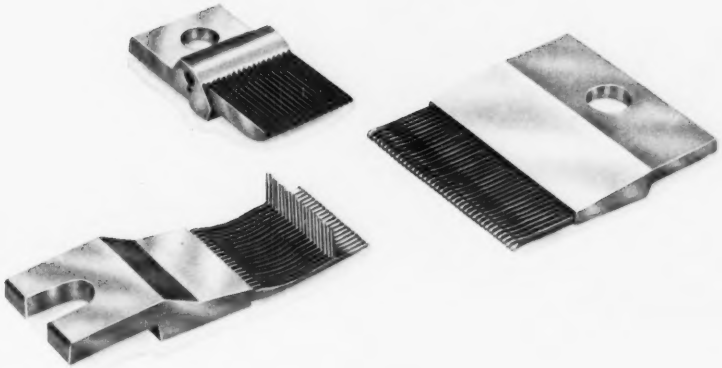
If your present skein dyeing equipment results in snarled yarn or broken filaments, you are incurring needless extra cost and time in back-winding. There is one sure way to end this waste and *only* one . . . install the SMITH-DRUM Type CSD Skein Dyeing Machine.

This is the machine that introduced the principle of "moving the liquor instead of the yarn." As a result, it entirely eliminates tangling or breaking of the yarn . . . leaving it in perfect condition for winding. It also dyes yarn more quickly and uniformly than other methods, resulting in savings of from 10% to 30%. If you dye filament rayon, nylon and other synthetic yarns or fine count cotton yarns in skein form, it will pay you to get the facts on this proven money-saving machine. Write . . .

SMITH, DRUM & COMPANY
432 W. Allegheny Ave., Phila. 33, Pa.



The SMITH-DRUM *Machine that*
Moves the Liquor Instead of the Yarn!



Torrington Announces a New Complete Leading Service for Raschel Machines

Torrington Needles Precision-Mounted In Cast Lead Bases Now Available; Also Complete Re-Needling Service.

As a further step in providing our customers with the most complete and efficient service possible, we now offer Torrington latch needles, precision-mounted in lead castings for raschel machines. These leads are precisely dimensioned and smoothly finished to assure exact spacing and alignment in the needle bar. Leaded thread guides and other leaded parts are also available.

Result: users of raschel machines can now rely on Torrington to safeguard *every* phase of their needling operations. Your nearby Torrington representative will be glad to give you full details of the benefits of this new service. Call him today.

The Torrington Company

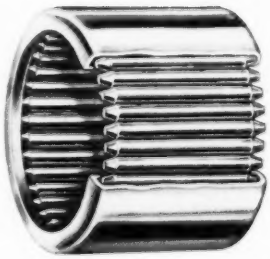
Torrington, Conn., U.S.A. • Established 1866

Branches: New York · Philadelphia · Chicago · Boston · Greensboro, N. C. · St. Louis · Toronto, Canada · *Pacific Coast Representative:* E. G. Paules, 1762 W. Vernon Ave., L. A. 37, Calif.

when high capacity pays off...

Torrington Needle Bearings are designed to handle heavy loads. A full complement of small diameter rollers distributes the load evenly over a large area. Thus—for a given O.D.—a Needle Bearing has greater rated radial load capacity than any other type of anti-friction bearing.

Other Needle Bearing advantages—compact size, light weight, ease of installation and maintenance—pay off, too. So let our engineers help you—as they have many others—take full advantage of Torrington Needle Bearings in *your* product.



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TORRINGTON *NEEDLE* BEARINGS

Needle • Spherical Roller • Tapered Roller • Straight Roller • Ball • Needle Rollers

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for durable softness and added sales appeal...

***PARAMINE T A® produces a soft... ...arn** in addition to a pleasing surface finish. An efficient cationic product, it imparts a durable, long-lasting, full hand to cotton and rayon fabrics, woolen cloth and hosiery. It is highly effective on all styles of woven and knitted goods, including tricot and glove fabrics.

PARAMINE T A is excellent for finishing cotton goods, plain dyed and printed in combination with gums, starches and similar products. On prints of very open design and blotch work, it gives a more even hand from selvedge to selvedge, and a smooth feel unobtainable with ordinary softeners. Write for details.

Arkansas Co., Inc.
P. O. Box 210,
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Gentlemen:
Please send me, without obligation:

- ☐ Full details on PARAMINE T A
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MANUFACTURERS OF INDUSTRIAL CHEMICALS FOR OVER 45 YEARS
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MAKE YOUR BALING A *Profitable* OPERATION *with a* LOGEMANN BALER

Tell Us Your Baling Problems

THAT'S the best way to get the right answers to low-cost time-saving baling. During our sixty years of building balers for the textile industry we've solved many a baling problem for factory owners. Our engineers know how to make baling operations pay their own way in time and labor-savings, in speedier, more reliable handling of bales, in lower maintenance costs. Many Logemann balers have been in profitable operation since the turn of the century—evidence of the ruggedness, durability, and long service life of Logemann baling presses.

In the interests of better baling operations in your factory, find out what Logemann balers can do for you. Tell us what your specific problem is. We'll gladly show you how it can be answered in terms of better bales at lower costs and make a specific recommendation based on your requirements. Write for information today.

Open balers for finished goods may be hydraulic or power-driven. Give platen dimensions required, maximum height of pile to be compressed, number of bales per hour, when requesting information on open balers.

Box balers for waste may be obtained in either the hydraulic or power-driven type. Mention the kind of waste to be baled, how much in how many hours, the preferred size or weight of bale when inquiring about box balers.

LOGEMANN BROTHERS CO.

3100 West Burleigh Street • • • Milwaukee 10, Wisconsin

Suppleness...

one of many† sales-winning properties
imparted to fabrics by

Cyanamid Textile Chemicals

DECERESOL® Wetting Agents
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NEW—DECERESOL OT-B, *a rapidly dispersible powder. Special Technical Bulletin sent on request.*

† others...
good hand
penetration
good dye affinity
improved sewing properties

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Life-Linestarter
PAIRED FOR PRODUCTION
Life-Line motor
WESTINGHOUSE
ON
TRIPPED
OFF
DO NOT
LUBRICATE

LINT?

Improve weave room performance with this pair

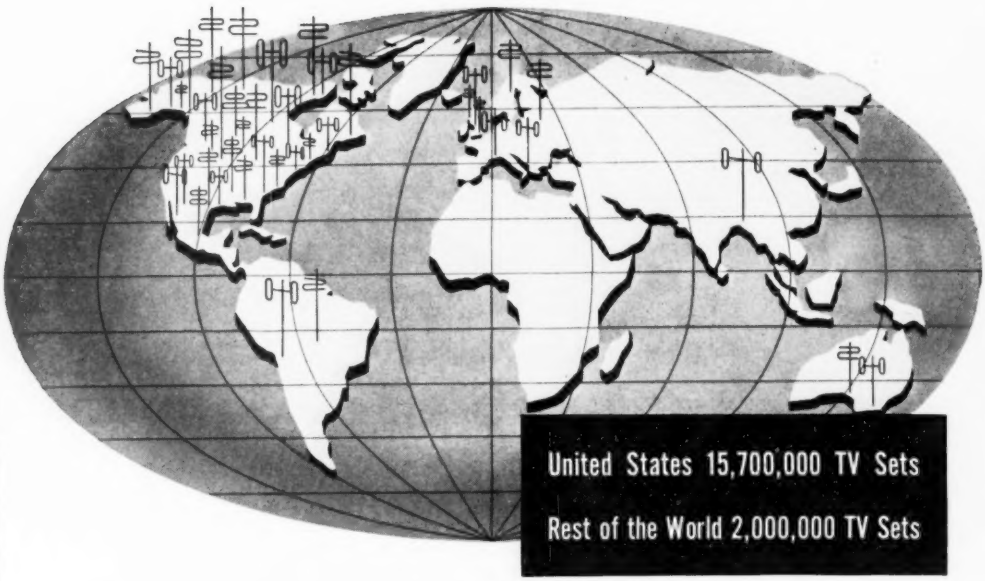
Lint, dust, dampness will not affect the operation of these two. They're especially designed for weave room operation. Look at the extra features of the loom motor starter—designed in collaboration with leading textile manufacturers and the Associated Factory Mutual Fire Insurance Companies and the only starter approved by A. M. F. I.

Lint and dust are kept out! A special Neoprene gasket forms a positive, continuous seal between the box and cover. Pressure from cover clamp makes sure every crevice is filled with the pliable Neoprene gasket—positive assurance that combustible elements cannot enter the enclosure. Thus, one major cause of weave room fires is eliminated.

The loom motor, too, is totally-enclosed. No chance for lint to clog windings. Notice, too, there are no greasing nipples or cups on the motor. Life-Lines have pre-lubricated bearings . . . need no lubrication. Thus, outages from faulty lubrication are eliminated. There's no dripping grease to mar textiles.

Together, these two cut motor outages and down time—save on maintenance time. Why not get the advantages of this combination? Ask your Westinghouse representative for complete details on Westinghouse motors and controls. Get a copy of the new Loom Motor Starter Booklet, B-5256. Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania. J-21654

YOU CAN BE SURE.. IF IT'S
Westinghouse
Life-Line
MOTORS and CONTROLS



COMPETITION Turns Luxuries into Necessities

Two millions of people throughout the world, washing machines, radios and television sets are miraculous inventions remote from their lives . . . for the wealthy only.

In the United States, however, a new product appears in no time in the homes of wage earners as well as salaried executives.

Consider television, for example. Only 6,500 sets produced in 1946 . . . over 5,000,000 in 1951. Or washing machines . . . more than 24,000,000 in 10 years.

What has Competition to do with this?

Do you think we'd continue to get more and better products if only one company made each item or each line?

No! We get more and better products here in America, because anybody who thinks he can make anything better or sell it more efficiently is free to try.

And many succeed. Take electrical products like radios and television sets . . . and home appliances like washing machines and electric fans. Does the biggest company monopolize this industry? Not by a long shot! Even counting all its affiliated companies, it still sells less than 1/5 of such products bought in this country.

There are nearly a thousand other companies that make home appliances, radios and television sets. And they do more than 4/5's of the business! The smallest of them make the biggest companies hustle their bones to keep making products better and better.

In America, a better product can always win consumer acceptance in any field.

Let's keep the COMPETITIVE SYSTEM working for us

The Competitive System can be killed! When industries are run by government, when taxes are so high that they destroy the incentive to work hard and risk savings in business ventures, the Competitive System languishes and dies.

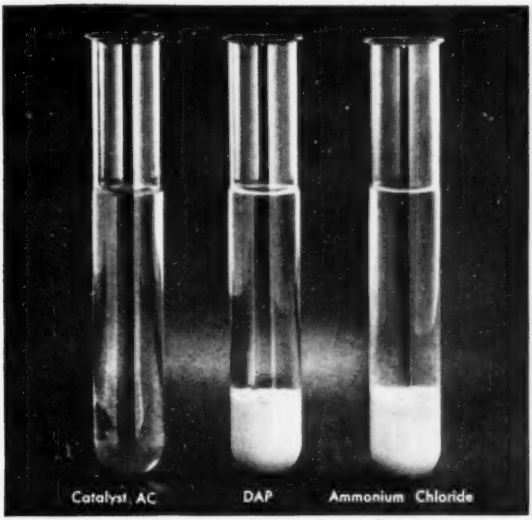
You've seen it happen in other lands. Let's not let it happen here.

Let's all of us watch closely to see that those who represent us in government are working with us and for us to preserve our Competitive System; to assure a tax structure that leaves enough incentive to make hard work worthwhile, so that *any* man with ability and energy has a chance to earn good money and keep most of it.

Competition thrives best where the rewards are high. People live best where competition thrives.

This report on PROGRESS-FOR-PEOPLE is published by this magazine in cooperation with National Business Publications, Inc., as a public service. This material, including illustration, may be used, with or without credit, in plant city advertisements, employee publications, house organs, speeches or in any other manner.

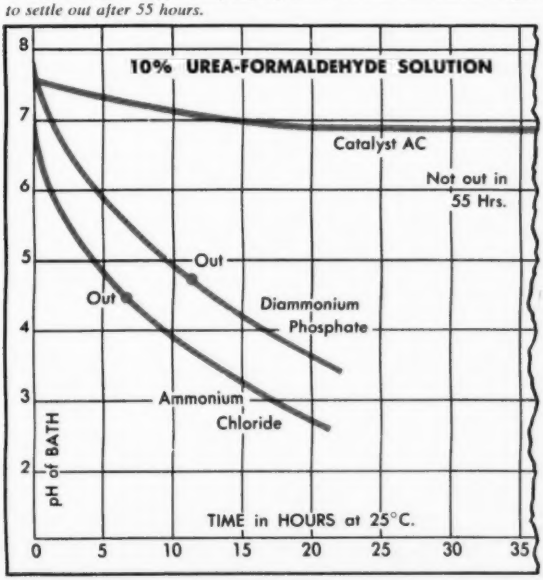
THE COMPETITIVE SYSTEM DELIVERS THE MOST TO THE GREATEST NUMBER OF PEOPLE



Photograph demonstrates "snowing out" effect of DAP and ammonium chloride shown graphically in chart below. Ten percent solutions of urea-formaldehyde (Monsanto's Santaloom) and these catalysts were allowed to stand at 25°C., as was also a similar solution containing Catalyst AC. In the presence of DAP and ammonium chloride, resin particles settled out after only 10½ and 6½ hours respectively, while sample containing Catalyst AC remained clear and in complete solution for more than two days.

•

Chart shows "pH Change with Time"—10% Urea-Formaldehyde with three resin catalysts at 25°C. In bath catalyzed with ammonium chloride, pH dropped from 7.0 to 4.5 in 6½ hours, at which time resin settled out. In similar experiment with DAP as catalyst, resin particles "snowed out" when pH had dropped to 4.8 after 10½ hours. In bath containing resin and Catalyst AC, pH dropped only slightly below 7.0 and *resin had not begun to settle out after 55 hours.*



LONGER LIFE

FOR YOUR RESIN BATHS

. . . when you use Catalyst AC!

Take just a moment—think what it will mean to your own operations to have your resin baths remain stable and uniform for 24 hours or more—without refrigeration! Then ask your Monsanto representative (or write direct) for the full story on Catalyst AC.

Positive results of laboratory and plant applications over the past three years . . . with both urea and melamine resins . . . have proved that Catalyst AC offers several distinct advantages over other available compounds:

Stable Bath assures uniformity of resin application and retention.

No Refrigeration needed to hold down acidity and lengthen bath life.

Objectionable Odors Minimized . . . since no ammonium salts are present.

Proved Performance in producing desired qualities, such as washfastness and softer hands.

These benefits of Catalyst AC make it the outstanding resin catalyst available today . . . Why not give it a trial in your plant?

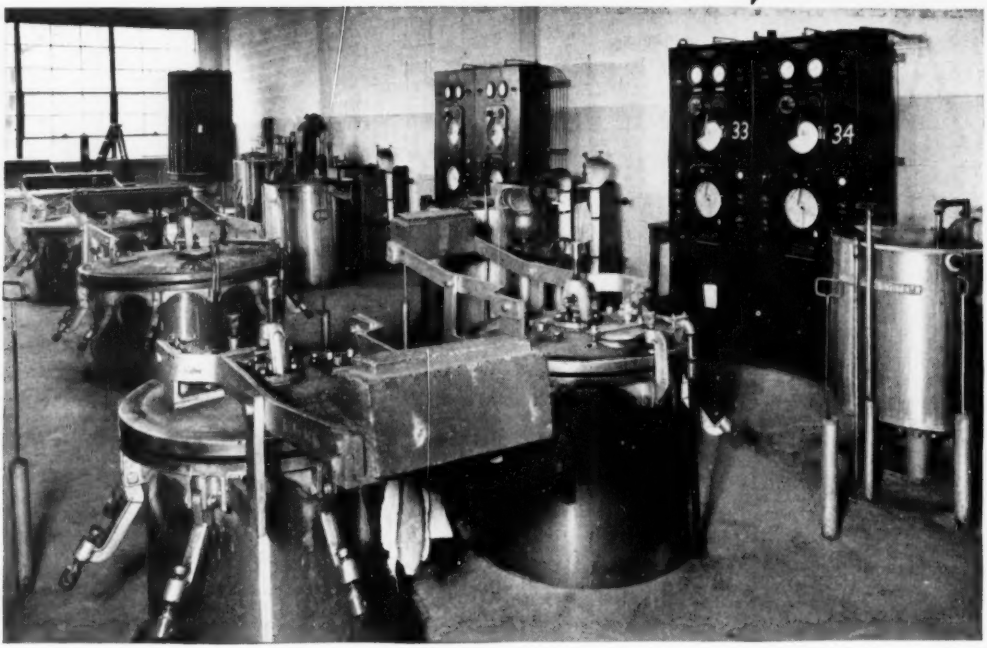
Santaloom: Reg. U. S. Pat. Off.

FOR MORE INFORMATION, WRITE
MONSANTO CHEMICAL COMPANY
TEXTILE CHEMICALS DEPT.
BOSTON 49, MASS.

MONSANTO
CHEMICALS — PLASTICS
®

SERVING INDUSTRY . . . WHICH SERVES MANKIND

Look who's BOSS



# of these package dye machines!

Those Taylor FULFLEX* Time Schedule Controllers are in charge, making certain of complete dyeing uniformity, extremely close matching of shades, and giving steam and labor savings as well! They are shown here controlling Morton Package Dye machines in a large New England worsted mill.

The operator simply sets three dials for any desired rate of rise, hold temperature and hold time in the dyeing cycle. Then he just presses the start button, and forgets it until the signal light tells him that the cycle is completed.

There are no cams to cut for different cycles. Any part of the cycle may be repeated by simply resetting the dial and pushing the start button again. Even controlled rate of cooling is available as an optional feature.

This is just a single example of the countless way that Taylor Automatic Process Controls can help cut costs, improve product quality in almost every phase of Textile manufacturing and processing. Ask your Taylor Field Engineer, or Write: Taylor Instrument Companies, Rochester 1, N. Y., and Toronto, Canada.

Instruments for indicating, recording and controlling temperature, pressure, flow, liquid level, speed, density, load and humidity.

*Trade Mark

Taylor Instruments
MEAN
ACCURACY FIRST
IN HOME AND INDUSTRY

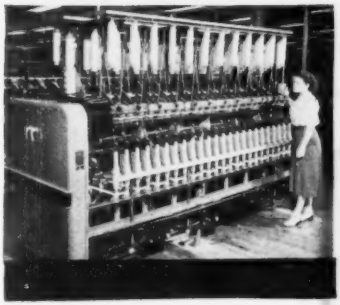
Stepped-up Staple Processing made possible by New Rover and Spinner

Added facilities for processing staple yarns from tow are provided by a 48-spindle FS-4 Rover and a 48-spindle SS-4 Spinner now installed at Avisco's Textile Research Department.

These new Saco-Lowell machines will process all the man-made fibers and all natural fibers except cotton in any length up to seven inches. Their use will be confined to the newer or modified worsted system, which involves fewer operations than the standard Bradford system.

The new Rover receives an untwisted sliver, drafts it, inserts minimum twist, and delivers it on a roving bobbin ready for spinning. The new Spinner accepts the roving from the FS-4 Rover and spins it into yarn.

The Rover and Spinner can be used with the Pacific Converter and a new Pin Drafter, also installed at Marcus Hook, to process yarn with fewer intermediate steps.



This expansion of the worsted division is but one segment of an overall broadening of the experimental work of Avisco's Textile Research Department. New developments in nearly every kind of textile machinery have been installed to round out the department's service to the industry.

Filatex yarns spark trend to ankle-length hose

The growing popularity of men's ankle-length hosiery is one result of the qualities of Avisco Filatex yarns. These elastic yarns are ideal for the elastic-tops that make socks self-supporting. Durable, lightweight with excellent laundering qualities, they are being successfully used for every type of sock in every price range. Development work to further broaden the application of these yarns is under way at the Textile Research Department.

MAKE USE OF *Avisco*®
4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

1 FIBER RESEARCH
2 FABRIC DESIGN
3 FABRIC PRODUCTION
4 FABRIC FINISHING

AMERICAN VISCOSE CORPORATION

World's largest producer of man-made fibers

Sales Offices: 350 Fifth Avenue, New York 1, N. Y.; Charlotte, N. C.; Cleveland, Ohio; Philadelphia, Pa.; Providence, R. I.

"I urge every American employer to promote the Payroll Savings Plan..."

DECHARD A. HULCY, PRESIDENT
Chamber of Commerce of the United States

"I urge every American employer to promote the Payroll Savings Plan among his employees as a means of building a reservoir of savings."

As President of the Chamber of Commerce of the United States . . . with literally thousands of contacts throughout industry and commerce . . . Mr. Hulcy is uniquely qualified to evaluate the Payroll Savings Plan.

As a business man, Mr. Hulcy puts his finger on a most important accomplishment of the Payroll Savings Plan: the enormous reservoir of savings, *future purchasing power*, built up by systematic saving.

Today, millions of Americans hold Series E Defense Bonds totaling $34.7 Billion. It will surprise many to learn that this figure is $4.8 Billion greater than on V.J. Day. And the $34.7 Billion total of outstanding Defense Bonds is mounting as more and more employers recognize the importance of the Payroll Savings Plan. During 1951 there was a sizable increase in the number of men and women saving through Payroll Saving Plans where they work.

During the calendar year 1951, 45,500,000 $25 Series E Bonds were purchased — a gain of 17% over the previous year. 12,000,000 $50 E Bonds were purchased in the same period, 14% over the previous year. $25 and $50 denominations are the bonds bought by Payroll Savers.

Building a reservoir of savings and future purchasing power . . . contributing to America's defense effort . . . helping to maintain America's economic stability by providing a check on inflationary tendencies, the Payroll Savings Plan is doing a three-way job.

If your company hasn't a Payroll Plan, or if your employee participation is less than 60%, the Savings Bond Division, U. S. Treasury Department will be glad to help you take your place among America's Honor Roll of "Companies on Payroll Savings". Phone, wire or write to Suite 700, Washington Building, Washington, D. C.

The U.S. Government does not pay for this advertising. The Treasury Department thanks, for their patriotic donation, the Advertising Council and

TEXTILE INDUSTRIES

1st in Quality in Service in Value

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ATLANTA 2, GEORGIA

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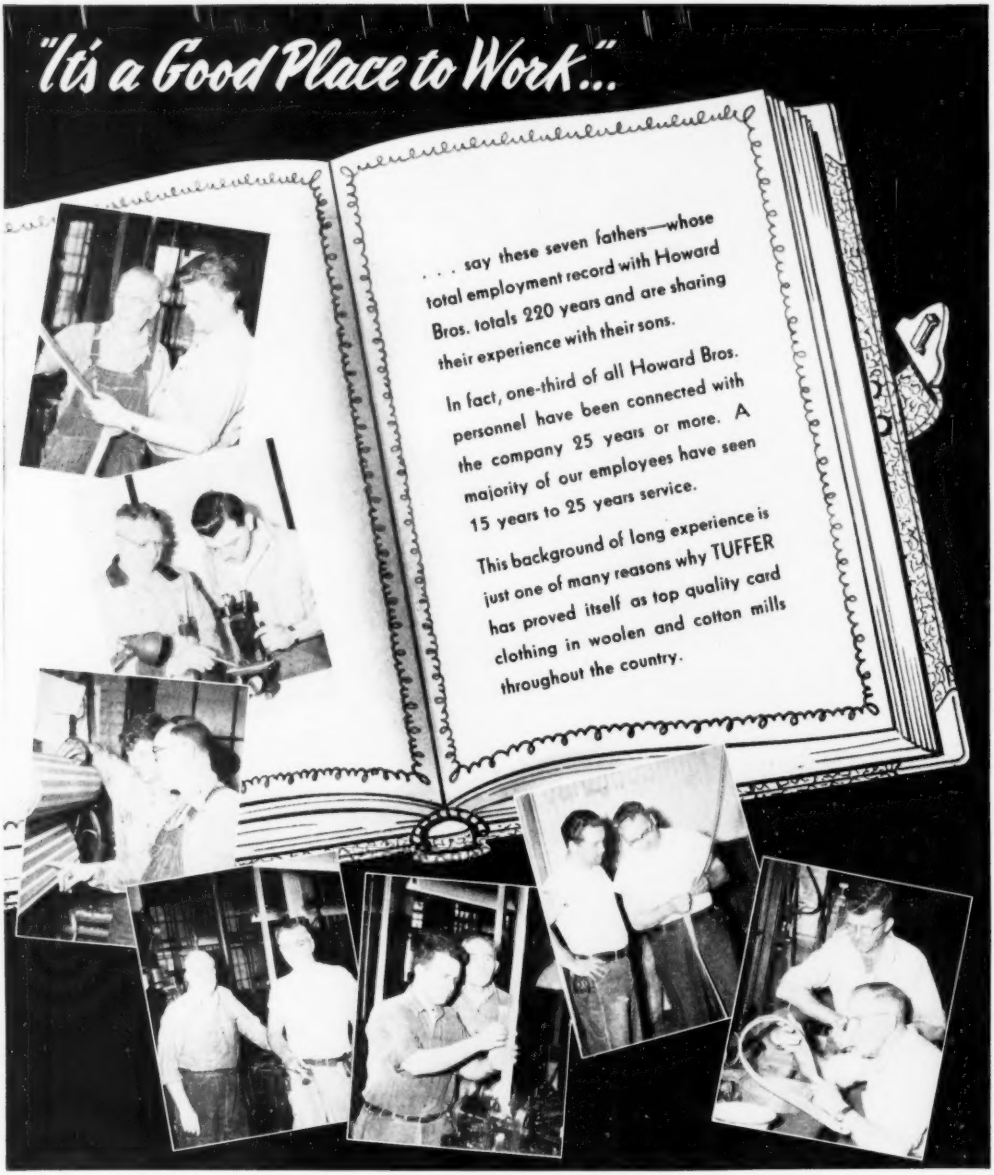
CORRUGATED SHIPPING CONTAINERS
FOLDING CARTONS
for the textile industry

APACO ESTABLISHED 1868

Glassine Specialty Bags
Belsinger Corrugated Textile Cases
Printed Paper and Cone Wraps
Textile Specialties

"It's a Good Place to Work..."

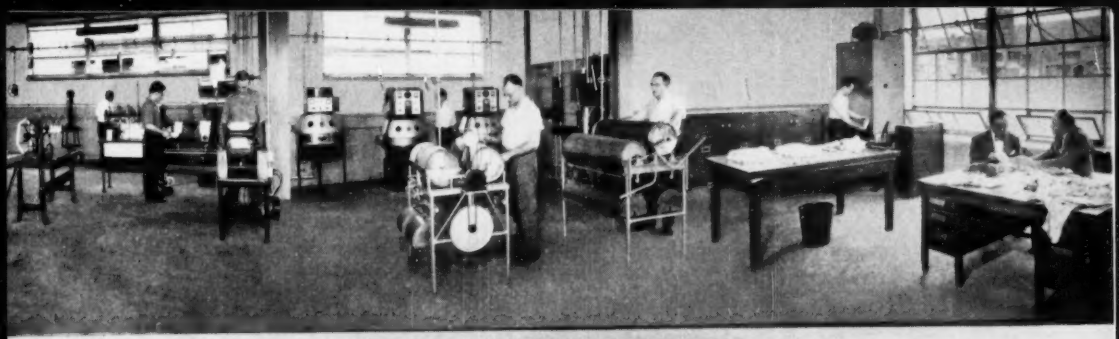

. . . say these seven fathers—whose total employment record with Howard Bros. totals 220 years and are sharing their experience with their sons.
In fact, one-third of all Howard Bros. personnel have been connected with the company 25 years or more. A majority of our employees have seen 15 years to 25 years service.
This background of long experience is just one of many reasons why TUFFER has proved itself as top quality card clothing in woolen and cotton mills throughout the country.

HOWARD BROS. MFG. CO. WORCESTER 8, MASSACHUSETTS

Southern Plants: Atlanta, Georgia and Gastonia, N. C. **Branch:** Philadelphia, Pa.

A-1 *Direct Representation in Canada*

. . . IT PAYS TO SPECIFY TUFFER CARD CLOTHING



you should make use of our new, modern

service laboratories

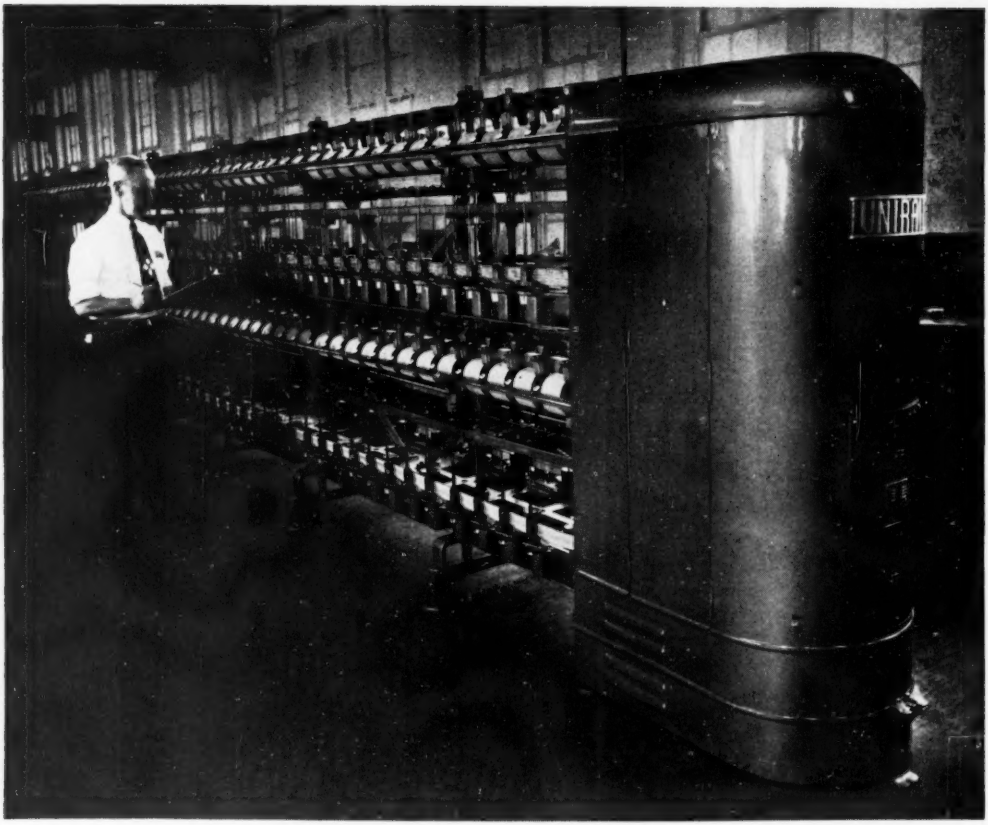
Send us your "dyeing problems." When we apply Althouse *original ideas* to them, together with our more modern methods of manufacture and our exclusive, built-to-order equipment, we'll come up with a practical, workable solution to enable you to use your own dyehouse technique. Make use of this free service. A few of our new, model dyeing laboratory departments are illustrated.

Althouse Chemical Company, Inc.
READING, PENNSYLVANIA

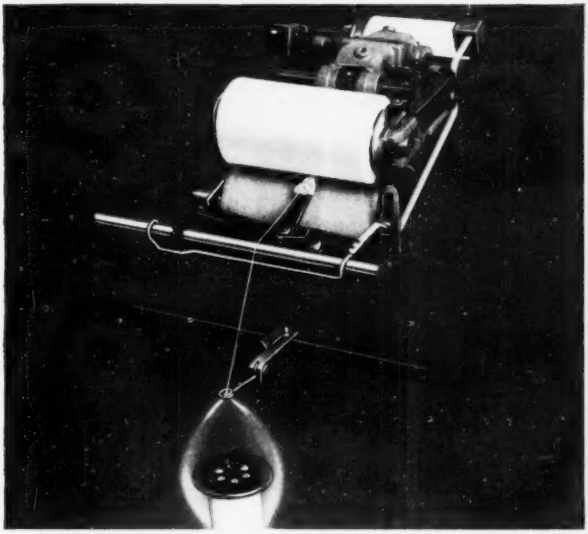
pace-setter in precision dye-making

All-New Unirail Uptwister

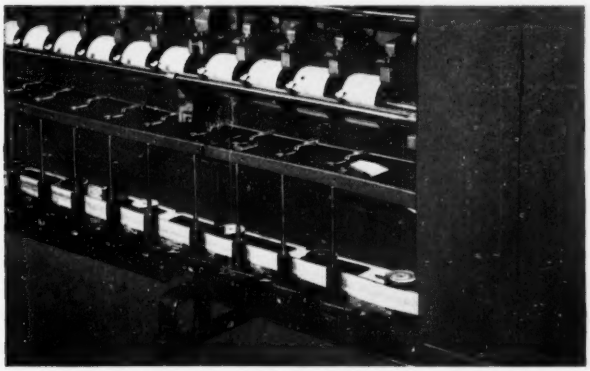
cuts your costs four ways and improves yarn quality



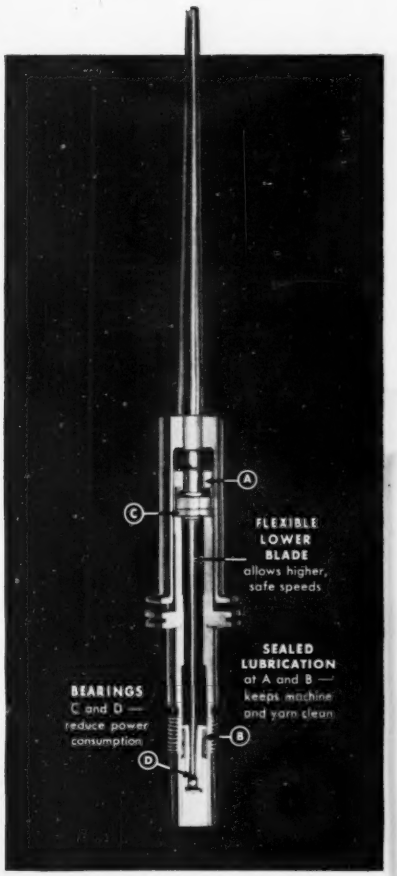
1. PRE-ERECTION AND FACTORY RUN-IN before shipment greatly simplifies the installation of the Unirail Uptwister in your mill. This Standard Bobbin Take-Up Unirail Uptwister — here shown during factory run-in and inspection — comes to you in only three sections. They are ready to operate in a matter of hours. This pre-erection also eliminates the handling and storing of numerous boxes and crates . . . reduces costly supervisory time . . . does away with "missing parts" delays. These savings apply whether you order Straight or Tapered Headless Package, Bobbin Hanger, or Finger Take-Up Unirails.



2. LESS YARN HANDLING leads to more production . . . lower costs and better quality. Straighter thread line from delivery to take-up package plus self-threading guide, quick threading centering eye, simple automatic tailing device and other features cut yarn handling time far below anything you've ever known before. This applies to both Bobbin and Headless Package Take-Up. Further time is saved on the Headless Package Unirail by the automatic tailing device and the entirely new hinged arbor, which guards quality by letting you doff without touching the yarn. Stop motion, too, protects the yarn by lifting the package off the take-up roll when an end-break or runout occurs.

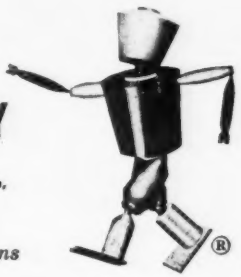


3. LESS MAINTENANCE AND LONGER LIFE result from a combination of unique features. The new Uniflex Spindle, described at the right, requires lubrication only once a year. So do the ball-bearing idlers, which don't have to be removed for lubrication. Yearly lubrication takes care of the take-up shaft bearings and leakproof twist unit. All are designed to eliminate oil dispersion. This reduces lint accumulation. So, you don't have to clean machines so often. Clean machines means clean yarn production at all times. Accurate machining, sturdy cast iron bedplate construction and vibration reduction maintain alignment and retard wear.



4. LOWER POWER COSTS—according to tests under various conditions which showed savings up to 20% and more — result from the superior design features incorporated in the new Unirail Uptwister. Chief among them is the new high-speed Uniflex roller-bearing spindle. There's no other spindle like it. Its flexible lower blade and unique bearing design cut down vibration . . . reduce bearing loads . . . increase spindle life . . . allow safe speeds up to 16,000 RPM under satisfactory conditions.

WRITE FOR BULLETIN 501 which shows you how the entirely new Unirail Uptwister improves yarn quality and package build at higher speeds and lower costs.



UNIVERSAL WINDING COMPANY

P. O. Box 1605, Providence 1, R. I.

Boston, Philadelphia, Utica, Charlotte, Atlanta, Chicago, Los Angeles; Montreal, Hamilton, Canada; Manchester, England; Paris, France; Basle, Switzerland

Agents in every principal textile center throughout the world

Winding and Twisting Machinery for Natural and Synthetic Yarns

23.1.30

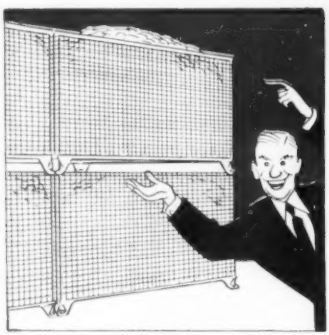
this poor man ran a B.C.* mill

*BC means before Cargotainers . . . this poor chap never heard of them. His storage was haphazard; his shipping was slow; his inventories were seldom made with any accuracy.

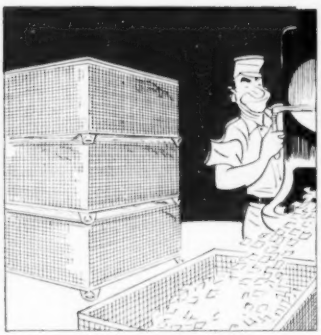
To make matters worse, the floor space of his mill was so cluttered up with finished and semi-finished merchandise that operating efficiency and safety were at low ebb.

Needless to say, operating costs were higher than at any time since the founder grew a beard, and they were still going up. Just in time a Cargotainer salesman came to call.

then he saw the light and went A.C.*

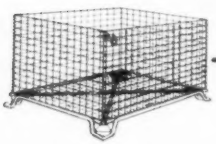


*AC—"after Cargotainers"—things were very much different. Even the heaviest of his products were visibly stored, tier on tier, in sturdy open-mesh Cargotainers. He never knew he had so much floor area.



Inventory check was now easy, and all materials and parts remained right in their rugged collapsible Cargotainers as they moved to assembly line and shipment. Safety records went up and costs down.

Moral: If by chance you are BC, you can save by going AC. Without obligation, our Materials Handling Engineers will show you how. Write today. Dept. TI, Pittsburgh Steel Products Co., Grant Bldg., Pittsburgh 30, Pa.



CARGOTAINERS

by Pittsburgh Steel Products Company

A Subsidiary of Pittsburgh Steel Company

VOGUE says

"More Sunny Blues everywhere"

SANDOZ has the dye you need for your blue shades

for wool or silk

Xylene Fast Blue PR
Xylene Fast Blue P2G

for cotton or rayon

Pyrazol Fast Blue FGL
Pyrazol Fast Blue LUL
Pyrazol Fast Blue 3GLN

for acetate or dacron

Artisil Direct Blue GFL*

*This Sandoz blue combines excellent fastness to light- and gas-fading with good dyeing properties.

Send for your copy of Sandoz' booklet, "Dyeing of the Newer Synthetic Fibers," covering the processing of *orlon*, *acrilan*, *dacron*, *dynel* and *vicara*.

SANDOZ

thinks ahead with textiles

SANDOZ

For forecast colors as well as perennial favorites for both natural and synthetic fibers—select from Sandoz' line of chrome, acid, acetate and direct dyes . . . and auxiliary chemicals — detergents, dyeing assistants, finishes.

Please turn the page

4 LEUCOPHORS

Optical Bleaches for Whiter Whites... Brighter Brights

LEUCOPHOR WS

for Wool, Nylon, Acetate, Silk

ORLON, DYNEL

It's easy to apply because it is absorbed by the fiber at low temperatures

LEUCOPHOR R

(REDDISH CAST)

for Cotton and Rayon

Excellent in anti-crease liquors and other acid finishing processes

LEUCOPHOR B

(BLUISH CAST)

for Cotton and Rayon

Improves white effects on checked or striped fabrics containing colored and white effects

LEUCOPHOR DC

Soluble in organic solvents: trichlorethylene, carbon tetrachloride, tetrachlorethylene, benzene, chlorobenzene, toluene, naptha, acetone and mixtures of these solvents

Send for your copy of all these new Sandoz' booklets:

- √ Leucophor B
- √ Leucophor WS
- √ Leucophor R
- √ Leucophor DC

SANDOZ CHEMICAL WORKS, INC., 61 Van Dam Street, New York 13, N. Y. **Sales offices:** Boston, Providence, Fairlawn, N. J., Philadelphia, Charlotte, Chicago, Los Angeles, Montreal, Toronto.

SANDOZ *thinks ahead with textiles*

SANDOZ

WANT TO FIND EXTRA PROFITS IN YOUR TEXTILE PLANT?

• One big problem management faces today is rising costs, increased taxes, shrinking profits. But you can build extra profits *now* in your textile plant by developing new textile products . . . of better quality . . . at lower cost with Rando-Feeder and Rando-Webber.

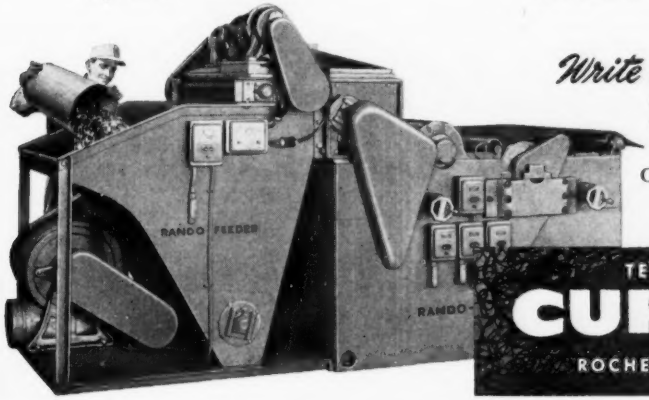
SEE THE RANDO-FEEDER AND RANDO-WEBBER TODAY . . .

The *ONLY* Textile Machine That Gives All These Results:

- Blends practically all types of fiber—1½" or less.
- Blends other waste materials with fibers.
- Can introduce granular materials and resin powders in combination with fiber materials.
- Can produce webs from many materials that cannot be successfully handled either on cards or garnetts.

Rando-Feeder and Rando-Webber Webs may be *superior* for your purpose because:

- They have two-way strength . . . minimum orientation.
- They may be heavier . . . better resistance to delamination or splitting.
- They have better filtration characteristics.
- They may be springier . . . higher resilience.
- They have less weight of fiber for same apparent thickness.



Write today for detailed information and how you can have a web made from your own fiber.

Curlator Corp., 578 Blossom Road, Rochester 10, N. Y.

TEXTILE DIVISION
CURLATOR
CORPORATION
ROCHESTER 10, NEW YORK

HIGHLIGHTS of a MODERN DYE BECK

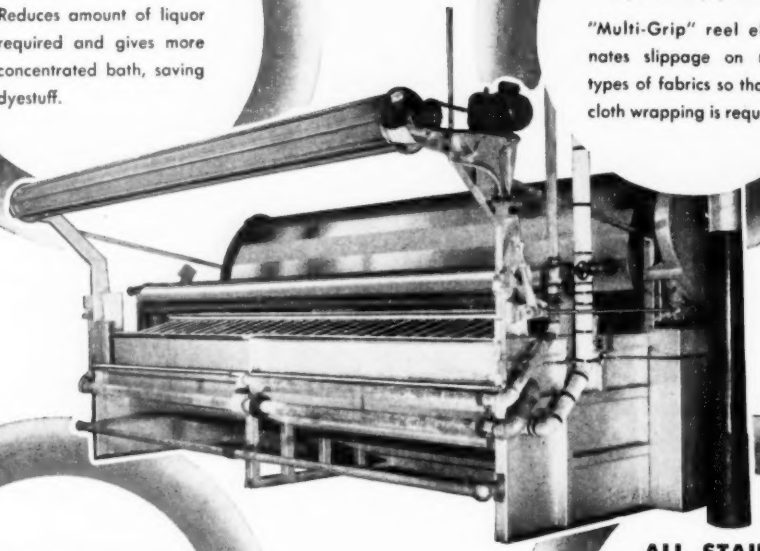
BETTER DYE LIQUOR RATIO

Reduces amount of liquor required and gives more concentrated bath, saving dyestuff.

DRUM TYPE REEL

(optional equipment)

"Multi-Grip" reel eliminates slippage on most types of fabrics so that no cloth wrapping is required.



ROUND BOTTOM

Minimizes tangles and tie-ups, promotes free ballooning of cloth and reduces tension to a minimum.

ALL STAINLESS STEEL

Large capacity (up to 40 strings), all stainless steel tub makes for quick color changes, high volume production and long machine life.

"The Fleet Line"

STAINLESS STEEL DYE BECK

Further information on Request

RIGGS AND LOMBARD, INC.

FOOT OF SUFFOLK STREET, LOWELL, MASS.

"The Fleet Line" — A complete line of modern equipment to successfully handle present day wet-finishing, carbonizing and dyeing requirements.

DOMESTIC & CANADIAN AGENTS: — Paul A. Merriam, 1491 Broad St., Prov., R. I. • Charles H. Dunker, 1236 So. Maple Ave., Los Angeles 15, Calif. • Albert R. Breen, 80 E. Jackson Blvd., Chicago 4, Ill. • Francis H. M. New, P. O. Box 1083, Greenville, S. C. • H. E. Mott Co., Ltd., Brantford, Ont.

EXPORT AGENTS: — Latin America — Balkan States, Egypt, Palestine, India — Meyer, Lyra & Co., 228-229 Fulton St., N. Y., N. Y. • South Africa — Noel P. Hunt, Pty., Ltd., Embassy House, 326 West St., Durban, South Africa • China — G. R. Coleman & Co., Inc., 50 Church St., N. Y., N. Y.

You'll turn out more quality hosiery, underwear, or outerwear when you use Laurel soaps, oils and finishes. They give you better production and softer, smoother, faster selling knitting.

Scientifically developed to meet the needs of knitters, Laurel Products have won an outstanding place as processing agents for all fibers. Among the better known for their performance are these —

Laurel Processing Agents for Knit Goods

dye — bleach — finish

Laurel Hydrocop & 3B Softener • Laurel Brand Soaps
Laurel Textile Oil • Laurel Synthetic Detergents
Laurel Hydrosol • Laurel Nylon Finishes
Laurel Hosiery Finishes • Laureltex Transfer Remover
Laurel Yarn Conditioning Oils
Laurel Knitting Machine Oil

Check with us for practical recommendations for your specific problem.

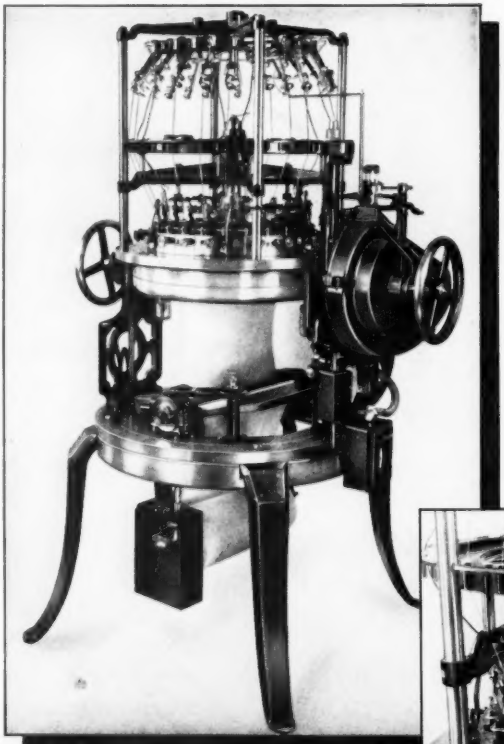
textile
soaps, oils, finishes
LAUREL SOAP MANUFACTURING CO., Inc.
Wm. H. Bertolet's Sons
ESTABLISHED 1909

Warehouses:
PATERSON, N. J.
CHARLOTTE, N. C.
CHATTANOOGA, TENN.

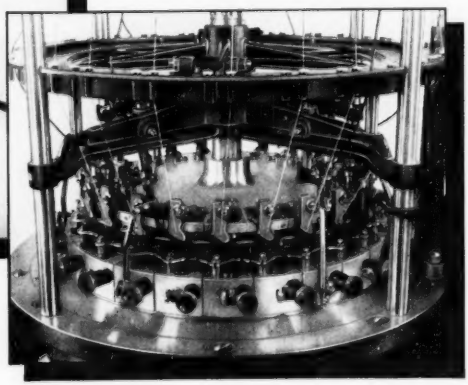
2603 E. TIOGA ST. • PHILADELPHIA 34, PA.

5 BIG REASONS You'll want to Specify...

The WILDMAN MULTIPLE-FEED RIB MACHINE



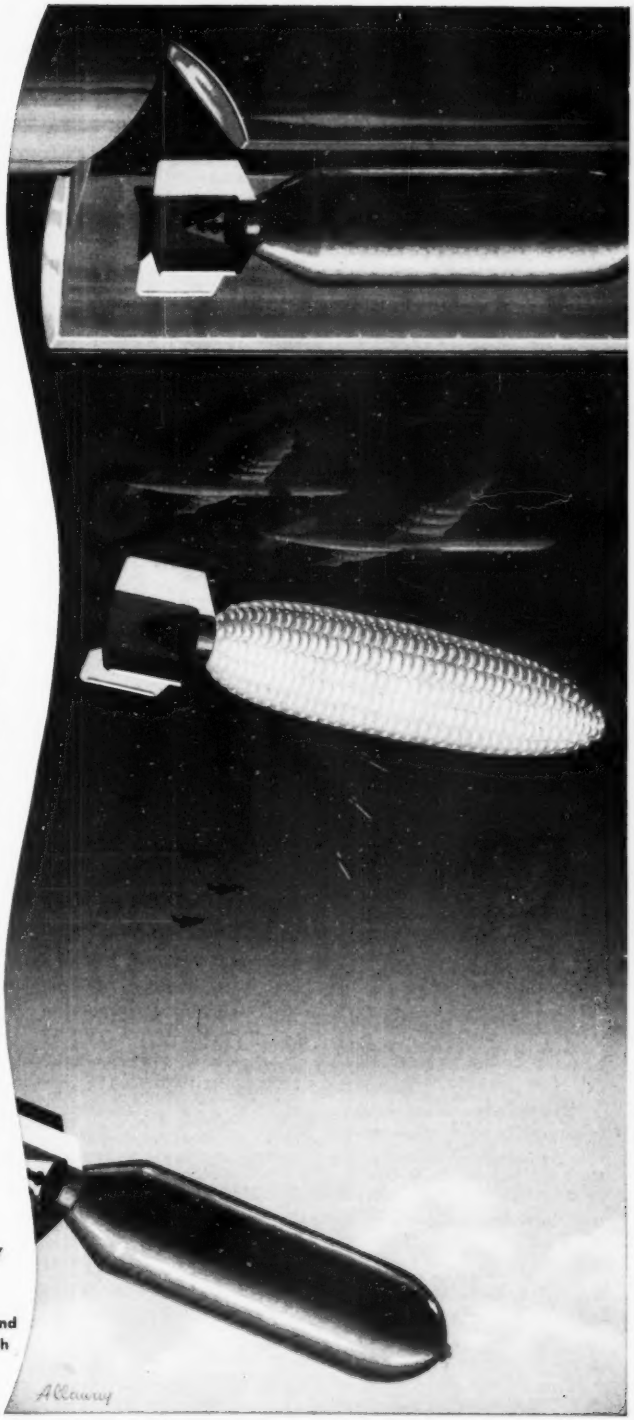
1. Assures Better Styling
2. Guarantees Uniform Sizes
3. Uses Less Power for More Production
4. Offers Flexibility for pattern designs in sports wear and all other knitted garments
5. Accelerates Production



Wildman
MANUFACTURING CO.

NORRISTOWN, PENNSYLVANIA

What's corn doing 35,000 feet up?



The casing of the bomb . . . possibly the high explosives inside . . . both require the use of special corn products in the manufacturing process. These, and hundreds of other corn products, have been developed by the continuing basic research in corn that serves all American industry . . . serves you.

Corn products in textiles

In the textile field starches, gums and dextrines provide superior formula ingredients for many textile processes. New techniques involving the use of corn products are being developed as part of a continuing research program at Corn Products Refining Company.

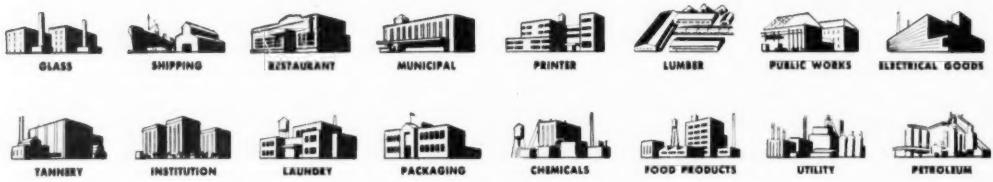
If you have a production problem why not check with Corn Products. A complete line of corn products for every purpose is available. Technical service is yours . . . no obligation, of course.

CORN PRODUCTS REFINING COMPANY
17 Battery Place, New York 4, N. Y.
Manufacturers of

GLOBE brand dextrines, gums	GLOBE brand starch	EAGLE brand corn starch

TODAY...

We're all in the steel business!



FOR EACH OF US TO *GET* MORE STEEL . . . AND PRODUCTS MADE OF STEEL . . .
WE'VE GOT TO *PROVIDE* MORE SCRAP TO *MAKE* THE STEEL.

Half the melting stock used in the steel mill or iron foundry consists of iron and steel scrap. In normal times, enough scrap is produced by the mills, foundries, railroads, fabricators and scrap dealers to fill the need.

But now the mills have stepped up capacity to meet the greatly increased military and civilian demands for steel. And that increased capacity has outstepped the supply of scrap.

That is why we are calling on plants in both metal-working and NON-METAL-WORKING industries to provide the needed scrap NOW.

You have the heavy scrap needed to make more steel

Enough obsolete machinery, equipment and parts are being carried as useless inventory to give a big push to the production of steel. Surveys have proved this.

The trick is to get that old steel into the hands of the steel producers.

We're putting that job up to you.

To help maintain steel production... provide more steel for the equipment you want . . . turn in your idle iron and steel to your local scrap dealer.

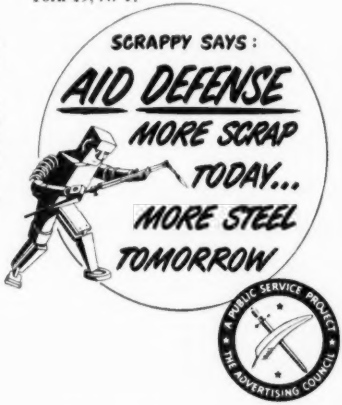
What you can do to help maintain steel production

1. Appoint one top official in your plant to take full responsibility for surveying the plant and getting out the scrap.

2. Consult with your local Scrap Mobilization Committee about its program to help out in the scrap crisis. For chairman's name, check with your Chamber of Commerce, or the nearest office of the National Production Authority, Department of Commerce.

3. Call in your local scrap dealer to help you work out a practical scrapping program. Non-ferrous scrap is needed, too.

4. Write for free booklet, "Top Management: Your Program For Emergency Scrap Recovery", addressing Advertising Council, 25 W. 45 St., New York 19, N. Y.



This advertisement is a contribution, in the national interest, by

TEXTILE INDUSTRIES

ACETATE IS BACKED BY THE BIGGEST ADVERTISING CAMPAIGN IN TEXTILE HISTORY

The new Federal Trade Commission rulings now require Acetate Identification on all acetate merchandise. To help you comply with these new regulations on fiber identification, Celanese is providing free identification material and has launched a program of advertising, promotion, education and sales training—the most extensive campaign of its history!

1. **THE CELANESE THEATRE** "the best dramatic show on the air" is taking the message of Acetate to millions.

2. **Ads like these in LIFE, SATURDAY EVENING POST, WOMAN'S HOME COMPANION and GOOD HOUSEKEEPING every month!**

3. **Ads like these in VOGUE, HARPER'S BAZAAR, GLAMOUR, TODAY'S WOMAN, THE NEW YORKER, TOWN & COUNTRY— all designed for direct store tie-ins!**

4. Magazines and newspapers all over the country are featuring acetate merchandise on their editorial pages, building tremendous demand for acetate in all types of merchandise.

5. For Stores: A comprehensive program of services and materials to help in retail sales training, advertising and promotion, which includes a booklet on Acetate, a Question and Answer booklet, training films, copy aids for the retail advertising department and other helps. More than a thousand stores have ordered these selling aids.

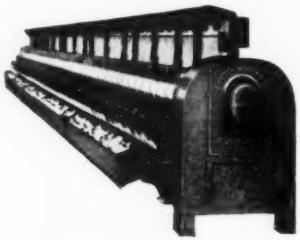
YOU CAN CASH IN ON ALL THIS ACETATE PROMOTION BY USING THESE FREE INFORMATIVE TAGS

- Have you ever had such advertising support before for any fiber or fabric that you use?
- Of course *not*. To tie in, order your *free* Acetate fiber identification tags from the Acetate Identification Bureau, 180 Madison Avenue, N. Y. 16.

Celanese CORPORATION OF AMERICA, 180 Madison Avenue, New York 16, N. Y.

DROPPED PLY

IT ISN'T POSSIBLE ON THE

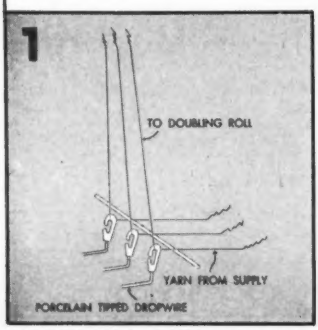


FOSTER MODEL 57 DOUBLER

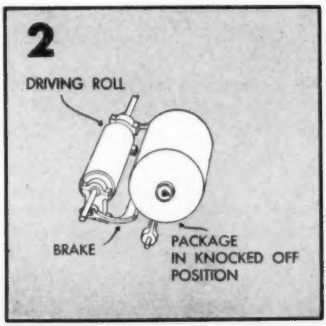
Each end drawn from bobbins or cones on the FOSTER MODEL 57 DOUBLER runs from the supply through a dropwire before reaching the doubling roll (see Figure 1). When supply from one cone or bobbin runs out, or when an end breaks, this dropwire falls and causes brake (see Figure 2) to stop package immediately. This prevents broken or run out end from reaching package (see Figure 3) and permits quick, easy single end piecing.

Note that the instantaneous acting brake comes up under the package and contacts it along the full length. This means quicker stops without damage to yarn. The dropwire brake action is only one feature of the Model 57. Here are some others:

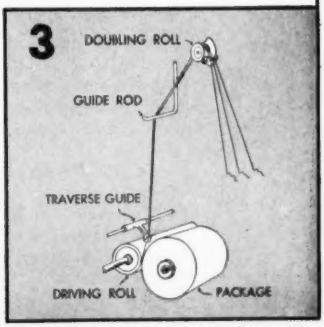
1. Machine may be equipped for one or two process doubling — direct from bobbins through slub catcher attachments, or from cones previously wound and inspected on FOSTER MODEL 102.
2. Guard prevents thread jumping off doubling rolls.
3. Minimum yarn strain by reducing number of sharp yarn bends.
4. Self-threading tension and slub catcher (when required) expedites quick threading and yarn inspection.



QUICK-ACTING STOP MOTION, with efficient brake, leaves sufficient yarn for single end piecing when supply runs out.



EFFICIENT BRAKE comes up under package and contacts the full length of tube. No adjustments, no parts to wear.



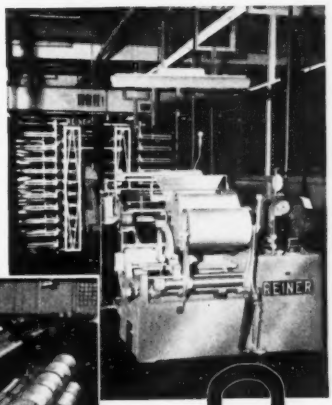
SHARP BENDS IN THREAD LINE ELIMINATED. Ends go from doubling roll to the Traverse Guide in back of package without any sharp bends. Minimum strain on yarn.

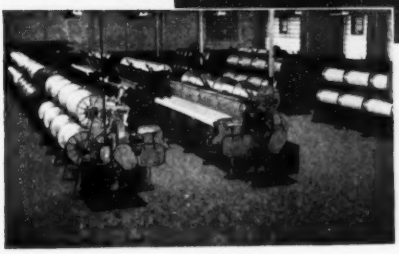
BULLETIN A-96 ON REQUEST

FOSTER MACHINE CO., Westfield, Mass., U.S.A.

SOUTHERN OFFICE: Johnston Building, Charlotte, North Carolina • CANADIAN REPRESENTATIVE: Ross Whitehead & Co., Ltd., 1475 Mountain St., Montreal, Que. • EUROPEAN REPRESENTATIVE: Muschamp Taylor Ltd., Manchester, England

Tricot at its best!





(Photos Courtesy Holly Knit, Inc.)

Available: 2 and 3-bar machines, with 2-bar machines convertible to 3-bar use and vice-versa—long needles for coarse gauge fabrics —knitting widths 168" and 84"— all gauges—automatic oil feed lines throughout—sturdy, rugged construction — pattern wheel or chain link drive—positive cloth take-up—and other features.

Another Success Story

Good planning, good management and an all-Reiner warp knit installation are the combination for the success of Holly Knit, Inc., makers of fine tricot cloth. We are proud to state that only Reiner Tricot Machines, Warpers and Creels were selected by this progressive and modern mill and that they have proved their worth and excellence in 'round the clock operation.

Those interested in the manufacture of fine tricot cloth owe it to themselves to find out more about Reiner Machines. Richly illustrated catalogs are available upon request. Remember, Reiner manufactures a fully inter-related line of warp knit equipment, from cone to knitted fabric.

The newest Reiner Tricot Machine assures speed with safety; an ingenious but easy to handle beam let-off and other mechanical devices add quality to quantity. In short, when you are operating Reiner Tricot Machines, you are assured of Tricot at its Best!

FOUNDED IN 1903

ROBERT REINER INC.

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STEEL CALENDER RACKS

DESIGNED FOR SAFETY AND LONG LIFE

for KITSON, SACO-LOWELL, ATHERTON, HOWARD-BULLOUGH, DOBSON & BARLOW and POTTER & JOHNSON pickers

For safety in operation, the tongue and grooved cut-steel gear rack and rack section of this patented calender rack are firmly fastened in place with a 3/16" soft-stock shear pin set in hardened tool-steel bushings.

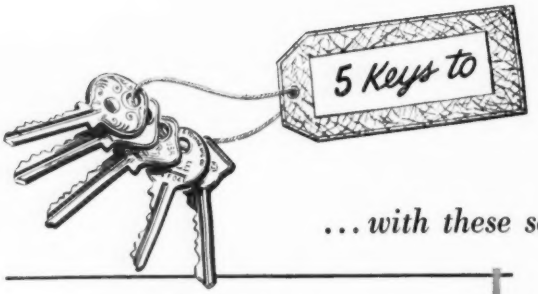
With the exception of the cast iron side plates on the head, the entire rack assembly is constructed of steel for hard wear and long life. One assembly, installed 10 years ago, has required only 85c for repairs.

The rack head is equipped with hardened steel ball bearing rollers and hardened steel pins. Furnished complete with cut-steel pinion rack gears.

WEST POINT FOUNDRY & MACHINE CO.

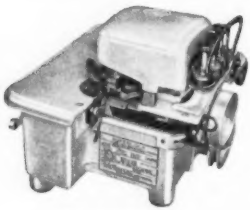
(Batson-Cook Company, Owners)

WEST POINT, GEORGIA



HIGHER SEWING EFFICIENCY

... with these service-proved "W&G" machines



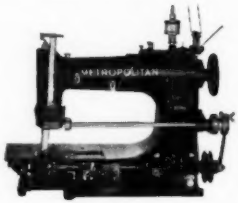
The "SUPERLOCK"

A smooth, silent, well-balanced machine for fast, effortless overseaming, hemming, edging and serging on a wide variety of fabrics.

Plant owners, machine operators, and maintenance men alike know that they can *depend* on "W&G" machines — for production speed and economy, ease of operation, and simplicity of servicing and adjustment. That applies to the 5 machines shown here, as well as to every other model in the *complete line* of "W&G" industrial sewing machines.

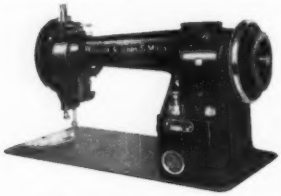
TYPE 1201 CHAINSTITCH MACHINE

Produces single-thread chainstitch at Lockstitch speed. For neckwear, umbrellas, facing and binding knit goods, label attaching, etc.



TYPE 950-CWS
ELASTIC ATTACHING MACHINE

For attaching elastic belts to ladies' underwear and men's shorts. Equipped with Perfect Stretch Elastic Tension Device.



TYPE 10A LOCKSTITCH MACHINE

Fully automatic lubrication assures sustained high speed production of all plain stitching operations on a wide variety of fabrics.

TYPE 1101
FLAT-BED SEAMING MACHINE

For center plait operations on shirts, sleeve setting on shirts, dresses, pajamas, and lap-seam felling on any light or medium weight fabric.

You'll see these and other "W&G" machines at the Knitting and Allied Crafts Exposition.

If you're planning to attend, we hope you'll visit our exhibit in Booths *27* and *28*, where "W&G" machines will be displayed and demonstrated on actual production work.

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Sewing Machine Co.

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BOOTH 54
KNITTING & ALLIED ARTS EXPOSITION
GRAND CENTRAL PALACE
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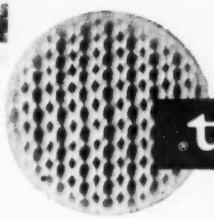

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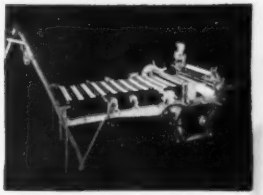
is the preferred process . . .

For over a quarter of a century Tube-Tex has devoted its efforts exclusively to the development of finishing and processing machinery for the knit goods industry, and today is the acknowledged leader in this field.

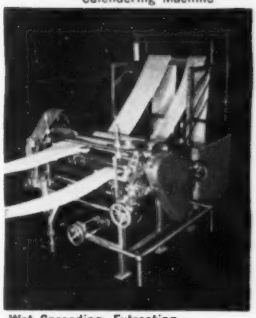
Tube-Tex engineers through continuous research and experimentation in wet-processing, drying and calendering of knitted fabrics have successfully overcome problems in processing, drying, shrinkage and cloth control. Relaxation shrinkage has been drastically reduced. Drying is accomplished in a matter of minutes.

Tube-Tex know-how has repeatedly supplied the answers to the wet and dry finishing needs of successful knit goods manufacturers. A list of leading manufacturers discloses a list of satisfied Tube-Tex users.

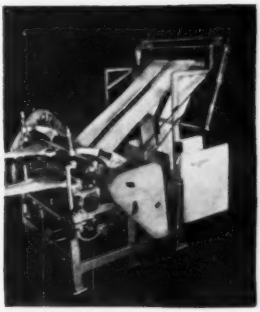
The most skilled technicians in the industry guarantee Tube-Tex customers peak machine performance and progressive technical service. Tube-Tex engineers are ready to discuss your specific requirements.



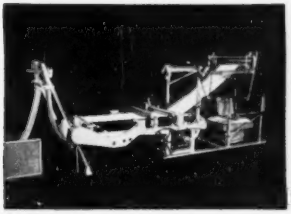
Finishing and Calendering Machine



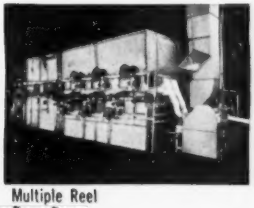
Wet Spreading, Extracting and Processing Machine



Wet Spreading and Extracting Machine



Tensionless Calender



Multiple Reel Dryer Range

TUBE-TEX is fully covered by patents issued and pending. All patents controlled by:

tubular textile machinery corporation

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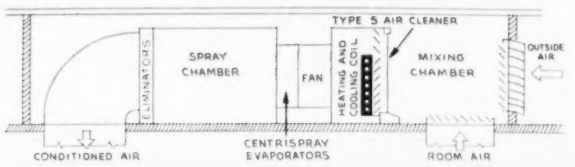
Licensed agents and manufacturers: H. W. Butterworth & Sons Co., Bethayres, Pennsylvania.

Another outstanding mill chooses . . .

Bahnson CENTRISPRAY AIR WASHERS



CENTRISPRAY Systems were recently chosen for one of the largest textile air conditioning projects ever planned. The selection followed a complete and thorough analysis of several proposed systems. This decision, based on hard facts, was made because Centrispray offered more value.

AIR CONDITIONING breathes new efficiency into the textile mill—for natural or synthetic fibres—for any textile process. Control of temperature and humidity lowers production costs, improves quality, promotes uniformity. That's why this mill will have air conditioning with refrigeration from opening through spinning—and evaporative cooling in weaving.

SYSTEMS by Bahnson, using Centrispray Air Washers, may offer additional advantages for you. Light, compact Centrispray Air Washers can eliminate or reduce the cost of apparatus houses. Money thus saved can be applied toward additional refinement of the system. This mill, for instance, will not have to build apparatus houses. The money saved will go for more flexibility of control, a closed circuit refrigeration system, and Bahnson Type S Automatic Air Cleaners for all air handled. It was a simple matter of getting the most for their investment.

FULL VALUE . . . .
FOR YOUR AIR CONDITIONING DOLLAR

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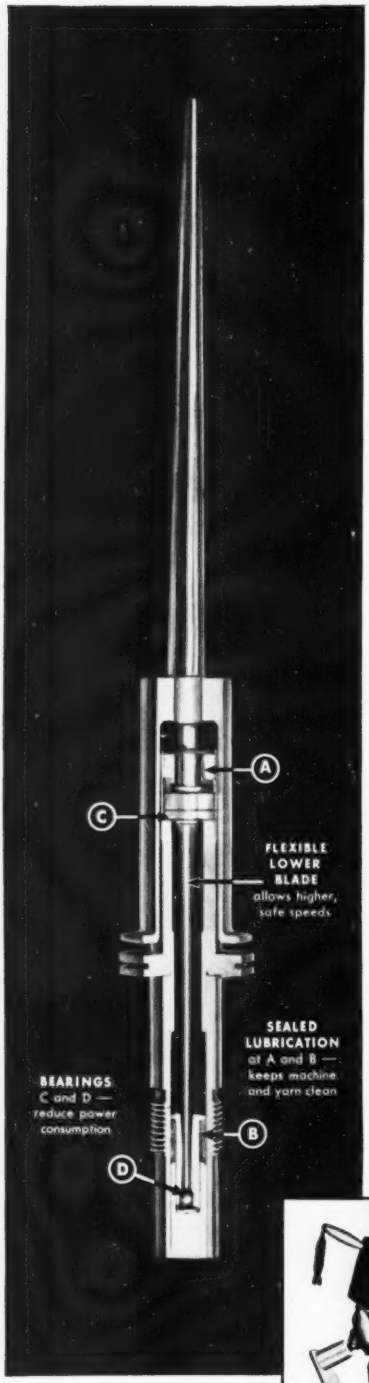

Entirely New Spindle

makes uptwisters produce more and better yarn at lower cost

Compare Uniflex Roller-Bearing Spindles with the spindles you are now using

Here's what you'll find:

1. You'll save oiling, cleaning and other maintenance time. There's no free oil . . . no oil splash . . . no contamination of yarn. Freedom from oil spray reduces lint accumulation . . . eliminates need for frequent cleaning. Lubrication system meters only enough oil from sealed-in felt reservoirs through porous bronze bushings to keep a thin film of oil on bearings. Needle-injected oil supply lasts a year. Less spindle vibration cuts down wear on spindle swing and other parts of your twister.

2. You'll run at higher spindle speeds . . . giving you more production per square foot of space. Flexible lower spindle blade cuts down vibration . . . reduces bearing loads . . . increases spindle life . . . allows safe speeds up to 16,000 RPM under satisfactory conditions.

3. You'll use less power under all operating conditions. High-speed flexible lower blade and unique bearing design reduce bearing loads and cut spindle power consumption to an all-time low.

WRITE FOR BULLETIN 51 which gives you complete data on Uniflex Spindles for endless belt drive — or contact our nearest sales office for full information.

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PROGRESS REPORT #1

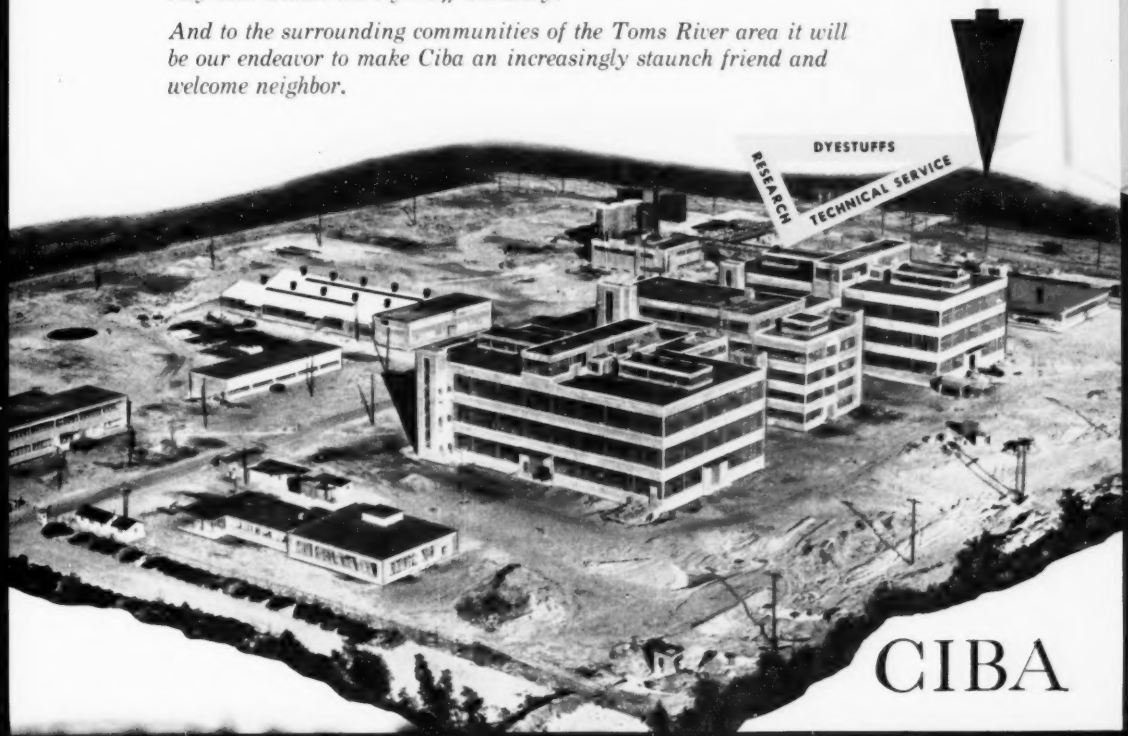
The "Toms River Story"

In the heart of the New Jersey midlands, on what had been 1200 unbroken acres of virgin pine forest until the Spring of 1949 when clearing crews moved in with axe, saw and bulldozer, a new and vast adjunct to the nation's chemical industry is rapidly taking shape . . . the most modern plant for production and technical service of vat dyestuffs in the world.

The Toms River Project is entirely Ciba conceived, designed, engineered and owned. It is being constructed, equipped and staffed by Ciba. Upon completion within the year it will be operated exclusively by Ciba.

These are the facts, but not the whole story. For beyond the tons of blueprints . . . the millions of man hours, in skill and labor . . . and the ingenious enterprise that will bring the new Ciba plant into being close on schedule . . . Ciba's management sincerely hopes that users of dyestuffs . . . and their customers in turn . . . will find in these vast new resources for vat dyes products and technical counsel a major extension of the services they seek within the Dyestuff Industry.

And to the surrounding communities of the Toms River area it will be our endeavor to make Ciba an increasingly staunch friend and welcome neighbor.



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Dyes for

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because . . .

1. **NEOLAN DYES** produce outstanding results on men's wear and ladies' dress goods.

2. **NEOLAN DYES** save time and labor . . . are particularly adaptable for and applicable to carbonized, unneutralized materials.

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NUMBER 2 OF A SERIES

How Gulf Periodic Consultation Service helps textile mills cut lubrication and maintenance costs

LUBRICANT STORAGE AND HANDLING SIMPLIFIED

A logical source of information and help on any problem that involves lubricants or lubrication is a trained Gulf Lubrication Engineer. You'll find he does more than simply recommend the proper oils and greases for every type of equipment in your mill. He offers effective help on every phase of lubrication!

When, for example, he sums up his recommendations of oils and greases, he keeps two things foremost in his mind: (1) the individual requirements of each piece of machinery; (2) the problem of storing and handling lubricants. He balances these two factors, one against the other, and reduces as far as practical the number and types of lubricants stocked and handled. In one prominent Southern textile mill the number of lubricants was reduced by more than one-half, which meant a considerable savings in the cost of lubrication. Then too, he'll help you improve your oil house and your system of dispensing oils and greases.

This is just one phase of Gulf Periodic Consultation Service. For additional information on this advanced plan, send the coupon below.

GULF SERVES INDUSTRY

Gulf Oil Corporation · Gulf Refining Company TI
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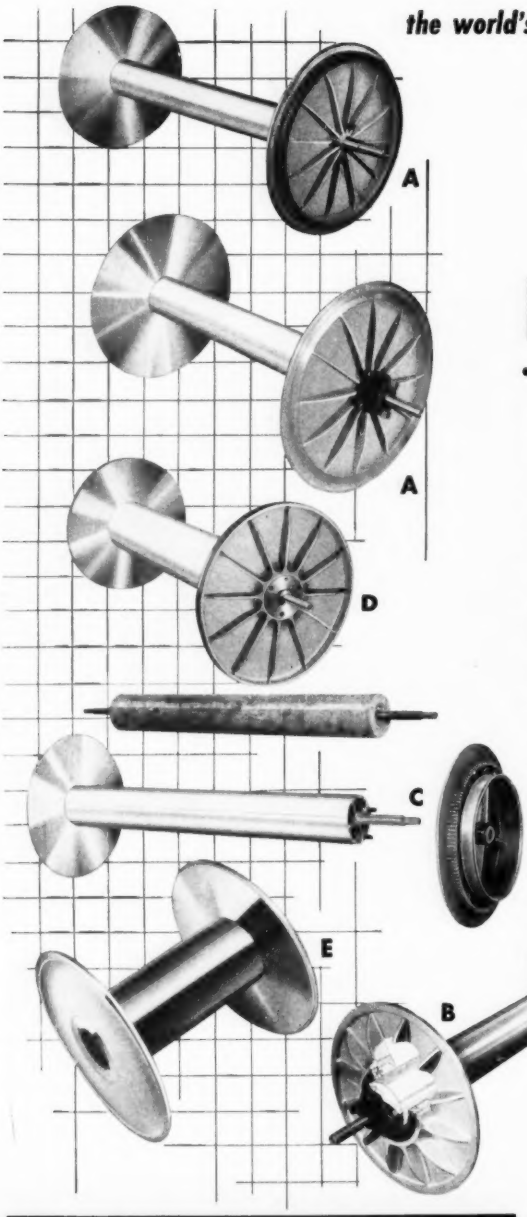
HAYES

gives you modern

beam engineering



Hayes Engineering facilities are the result of more than 17 years experience in designing and fabricating light metal products. Hayes experience in designing and fabricating, has produced textile beams that are light in weight, true-running and perfectly balanced to give you the greatest possible accuracy in weaving. Working surfaces are machined to precise limits of size and run-out and are highly polished and waxed. They are rust proof, warp proof, splinter-free and require no special maintenance. Hayes design, correct engineering and true running balance, together with the mirror-smooth surfaces which are possible by using light metals—result in a smooth high-speed operation, which produces better selvages and reduces rejects to a minimum.

Thousands of Beams are shipped each year, but demand far exceeds the supply. In fact, to make delivery of some items, more than six months are required, and in fairness to our customers, orders must be filled in the sequence they are received. We will do our best to fulfill your requirements and welcome your inquiries.

HAYES MODERN PLANT FACILITIES PRODUCE

A. Light Metal Loom Beams
B. Light Metal Adjustable Loom Beams
C. Light Metal Replacement Loom Beam Barrels
D. Light Metal Section Beams
E. Light Metal Tricot Beams

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HAYES INDUSTRIES, INC.
JACKSON, MICHIGAN

HAYES ALSO HAS die casting and machining facilities for large scale production of special light metal bobbins. Consult Hayes Engineers for modern engineering service on Light Metal Textile Beams — Write today to:
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Greensboro, N. C.

HYSTER® 20 Lift Trucks
handle loads faster and cheaper in
TEXTILE PLANTS

Hyster 20 (2000 lb. capacity)

Hyster fork-type Lift Trucks, Turret Trucks, Straddle Trucks® and Karry Kranes® have capacity ranges from 1000 lbs. to 30,000 lbs. Sold and serviced by Hyster dealers around the world.

SMALL IN SIZE. Hyster 20 is only 37 inches wide. Gets in and out of tight spots or narrow passageways quickly, efficiently. Rolls on pneumatic tires — works equally well indoors or outdoors. Trunnion mounted steering permits great maneuverability.

BIG IN RESULTS. Hyster 20 is fast, stacks high, goes anywhere. Easy on floor surfaces, on the operator, and on loads. Simple to operate. Low maintenance costs. Quality built to give years of heavy duty service. Cuts the heart out of materials handling costs — adds to net profits by saving time, money, manpower.

SEE YOUR HYSTER DEALER for a demonstration and list of owners. Or write for literature.

HYSTER COMPANY

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They did

Huntsville saw the advantages to be gained in terms of increased production and reduced costs through a modern power system.

what

They called in their Westinghouse representative early in their plans to get the benefit of Westinghouse experience with similar installations.

you can do

Do what hundreds of other textile firms are doing. Have Westinghouse work with your engineers and the machine builder in applying equipment to your plant.

to produce more

Whether it's more dependable and efficient electrical distribution like this, a new drive, better servicing, or simply the application of a piece of electrical equipment to do a tough job—Westinghouse has the answer.

Modernized Power System saves money, stops plant-wide shutdowns

If an outdated power system is slowing your production and boosting power bills, here's an idea. M. Lowenstein & Sons had this problem in their Huntsville Manufacturing Company's cotton mill. So they had Westinghouse help design a new system and supply modern apparatus. Here are the results:

In six months: One minor stoppage

With their old system, every electrical storm caused power stoppages throughout the Huntsville plant. Now however, any one electrical fault affects *only 5% of the mill.* In the first six months, with the new system there was just one power shortage. It affected only a small portion of the mill and lasted only 10 minutes!

Cuts $1,000 from monthly power bill

By distributing power more efficiently, the new system cuts the load demand from 5300 kw to 5100 kw. Figuring power cost at 1¢ per kwhr, this saves about $350.00 per month. Even more important, the power factor has been boosted from 80% to 88%—eliminating a $600.00 monthly penalty charge for low power factor.

Makes maintenance safe and easy

Dangerous open switchgear and overhead power lines have been eliminated in the new system. Power conductors now pass through underground ducts, with one phase wire in each duct. If trouble occurs, a ground-detector immediately tells the maintenance man which conductor has faulted. There's no more laborious searching.

Call Westinghouse for system help

If an outdated power system is costing you money, have your engineers get in touch with your Westinghouse office. And if you're planning a new plant, have Westinghouse help design an efficient system right from the beginning. For more information now, write for B-4045, "Industrial Plant Distribution Systems". Westinghouse Electric Corp., Box 868, Pittsburgh 30, Penna. J-94876

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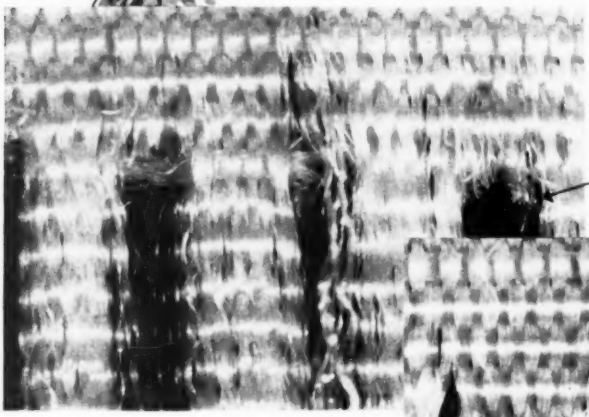
Westinghouse

EQUIPMENT FOR TEXTILE PRODUCTION

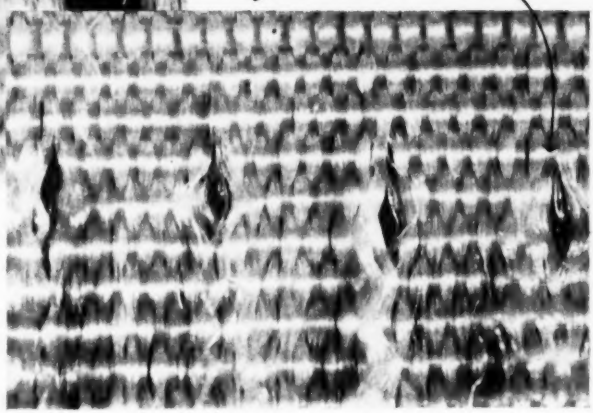
WEAK AT THE SEAMS... UNTIL FIBERS WERE LUBRICATED WITH PROFINE

What causes a well constructed fabric, sewed on modern machines, to exhibit excessive weakness at the seams? The pictures below tell the story.



Picture No. 1 shows the seam of a suiting fabric produced by a well known manufacturer. Needle damage . . . cut threads . . . can be observed where the fabric threads have been unraveled.

Seam threads pulled out here



Picture No. 2 shows a sample of the same suiting fabric . . . pre-treated *with Profine* and sewed under identical conditions. Needle damage is absent . . . no cut threads here!

Profine controls softness, body and hand. If your knitted or woven fabrics require a full-bodied hand, you can get it with Profine. This efficient finishing agent gives you good whites that won't discolor . . . provides good anti-curl cutting . . . permits high speed sewing.

Profine is designed to up-grade fabrics . . . to increase their saleability. Try it.

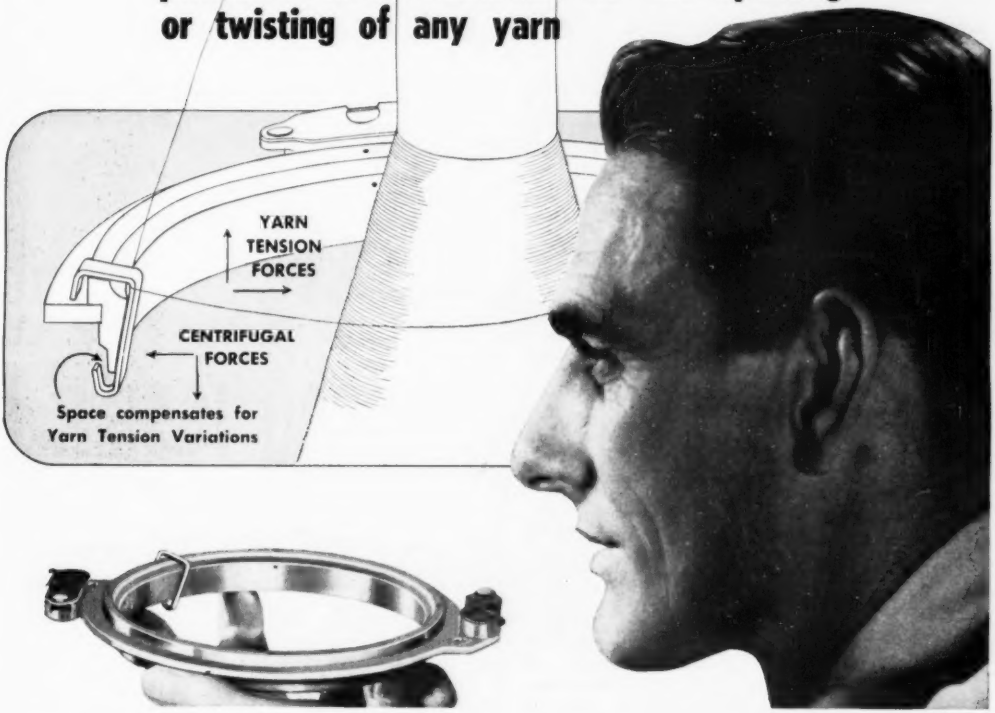
Profine

Procter & Gamble
CINCINNATI, OHIO

MAKERS OF OLATE, PROXOL AND ORVUS PRODUCTS FOR BETTER TEXTILE PROCESSING

The HERR CONICAL RING

provides ideal conditions for the spinning or twisting of any yarn



To prevent yarn breakage, and obtain smoother, cleaner yarn with heavier, more uniform doffs you will need Herr Conical Rings. Tension of the yarn is equalized by the centrifugal force of the traveler which is outward and downward.

The space between the bottom of the ring and the bottom of the traveler is the "factor of safety" that permits the traveler to compensate for varying tensions of the yarn.

The HERR CONICAL RING provides the right angles for the traveler. The conical surface directs the centrifugal force of the traveler downward. The traveler rides on the top and conical surface of the ring.

Wear of the traveler is held to a minimum by a specially formulated oil carried in capillaries to the top surface and the conical surface of the ring.

The traveler distributes and rides on the microscopic oil film. Maximum spindle speeds are achieved. There is no rewicking of the Herr Conical Ring.

Ask for help on your problem.

HERR

Gentlemen:

Please send literature on Herr Conical Rings and Herr Flyers.

Name .....

Position .....

Company address .....

Our problem is .....

MANUFACTURING CO., INC.

310 FRANKLIN STREET, BUFFALO 2, NEW YORK

FOR SPINNING AND TWISTING WORSTED, WOOLEN, RAYON, NYLON AND BLENDED YARNS OF ALL TYPES

TWO BIG AIDS for producing BETTER YARNS

NOPCO* FUA

—the self-fulling WOOL oil whose remarkable efficiency and versatile performance is proven daily in mills thruout the country. Acts like an *oil* during carding, gilling and spinning, and like a *soap* in wet finishing.

ASSURES:

1 Excellent fiber lubrication, elimination of static, no gumming of cards. Result: Better carding and loftier roving.

2 Increased yarn strength, improved spinning on mules or frames. Result: Higher spinning production.

3 Improved results from the steaming process—since Nopco FUA does not set in the yarn, nor in fabric when greige goods are crabbed. Result: No cloudy dyeing.

4 Excellent results from the fulling process—since Nopco FUA provides superior fulling with excellent sudsing action (*without* the addition of soaps or detergents).

5 Fast, ultra-efficient scouring—again without the addition of soaps or detergents. Residual oil content only about 0.2%.

Reg. U. S. Pat. Off.

NOPCO 1656-R

—the specially developed anti-static oil that enables the WORSTED manufacturer to obtain exceptionally good results—comparable to those achieved by users of Nopco FUA for wool processing.

1 Fibers remain static-free thruout carding, gilling, combing and drawing.

2 Even-running yarn is assured.

3 Removal is phenomenal. Used in conjunction with alkali, polyphosphate and water, Nopco 1656-R actually *converts into suds.* Soap usage is reduced 50-75%.

4 Because of this self-scouring feature, *better* dyeing and finishing results are obtained at *lower* cost.

5 Nopco 1656-R is non-gumming, non-yellowing, non-corrosive.

6 No changes in equipment or methods are necessary. Nopco 1656-R is applied in same manner as any conventional lubricant.

If you buy WORSTED top, specify Nopco 1656-R—every commission top maker is thoroughly familiar with it. If you manufacture WORSTED tops, process them with Nopco 1656-R and profit by gaining increased customer satisfaction.

NOPCO
EVOLVED THRU RESEARCH

NOPCO CHEMICAL COMPANY

HARRISON, NEW JERSEY

Branches: Boston • Chicago • Cedartown, Ga. • Richmond, Calif.

U. S. ACME

MODERN THROWING EQUIPMENT

SERVICE THAT KEEPS THOSE SPINDLES RUNNING

to help you get better performance and better yarn quality at lower cost...

Your throwing profits remain steady . . . your yarn quality remains uniformly high . . . your costs stay low—when your throwing equipment is operating at top performance! These are basic, elementary facts and the reasons why U. S. Textile maintains an adequate stock of repair, replacement and modernization parts for throwing machines.

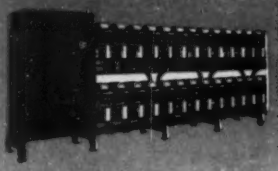
Whether you need repair parts to "keep those spindles running", or technical service to help you solve new throwing problems with your present machines—*CALL U. S. TEXTILE!*

Most orders for parts are shipped within 48 hours, oftentimes the same day, because U. S. Textile service did not end the day you bought the machines!

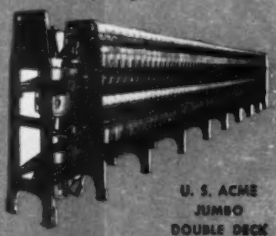
Yes, a U. S. Textile technical expert will come to your plant when you need on-the-spot cooperation . . . and the many years' experience of our engineers and designers, the results of never ending tests in our research laboratory—are all available to you! *Write, wire or phone . . . U. S. Textile is at your service!*

SERVICE AT THE TIME OF PURCHASE...
SERVICE OVER THE YEARS!

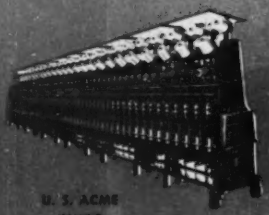
U. S. ACME HIGH SPEED SPOOLER spindleless construction



U. S. ACME FACE DRIVE TWISTER the high speed headless package twister



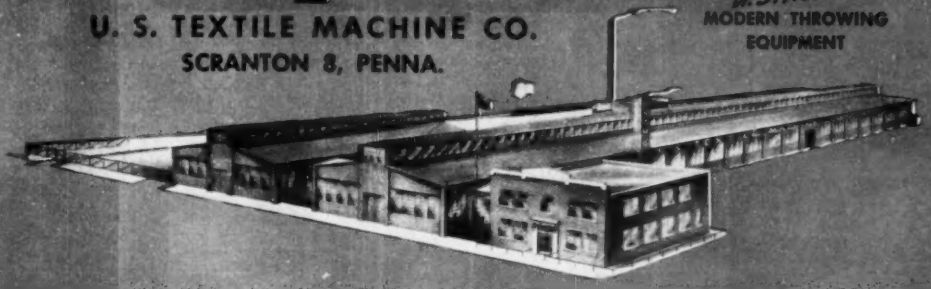
U. S. ACME JUMBO DOUBLE DECK TWISTER



U. S. ACME JUMBO DOUBLER TWISTER

U. S. TEXTILE MACHINE CO.
SCRANTON 8, PENNA.

THE HOME OF *U.S. ACME* MODERN THROWING EQUIPMENT

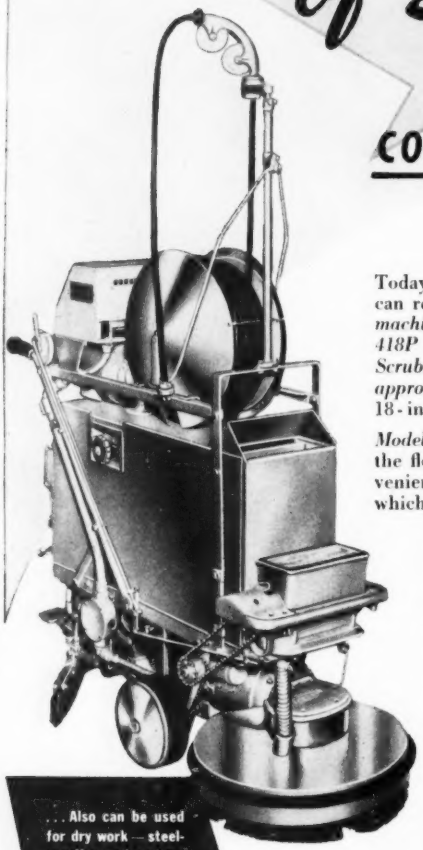


SMALL-AREA BUILDINGS...

Save 2/3 of Every Hour of Scrubbing Time

WITH A

COMBINATION SCRUBBER-VAC!



...Also can be used for dry work — steel-wooling, et cetera

Today, even buildings with but 2,000 to 15,000 sq. ft. of floor space can reap the labor-saving, cost-reducing benefits of *combination-machine-scrubbing.* Here's a *Combination Scrubber-Vac, Model 418P* at left, that's specially designed for such buildings. This *Scrubber-Vac,* which has an 18-inch brush ring, cleans floors in *approximately one-third the time* required with a conventional 18-inch machine and separate vac unit.

Model 418P applies the cleanser, scrubs, and picks up (damp-dries the floor) — *all in one operation!* Maintenance men like the convenience of working with this single unit... the thoroughness with which it cleans... and the features that make the machine simple to operate. It's *self-propelled,* and has a *positive* clutch. There are no switches to set for *fast* or *slow*—slight pressure of the hand on clutch lever adjusts speed to desired rate. The powerful vac performs efficiently and quietly. (Powder dispenser is optional.) Compactly built, the *418P* also serves advantageously in larger buildings for the care of floors in narrow aisles and congested areas.

Finnell makes *Scrubber-Vac Machines* for small, vast, and intermediate operations, and in *self-powered* as well as *electric* models. From this complete line, you can choose the size and model that's exactly right for *your* job (no need to *over-buy* or *under-buy*). It's also good to know that you can lease or purchase a *Scrubber-Vac,* and that *there's a Finnell man nearby* to help train your maintenance operators in the proper use of the machine and to make periodic check-ups. For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 1304 East Street, Elkhart, Indiana. Branch Offices in all principal cities of the United States and Canada.

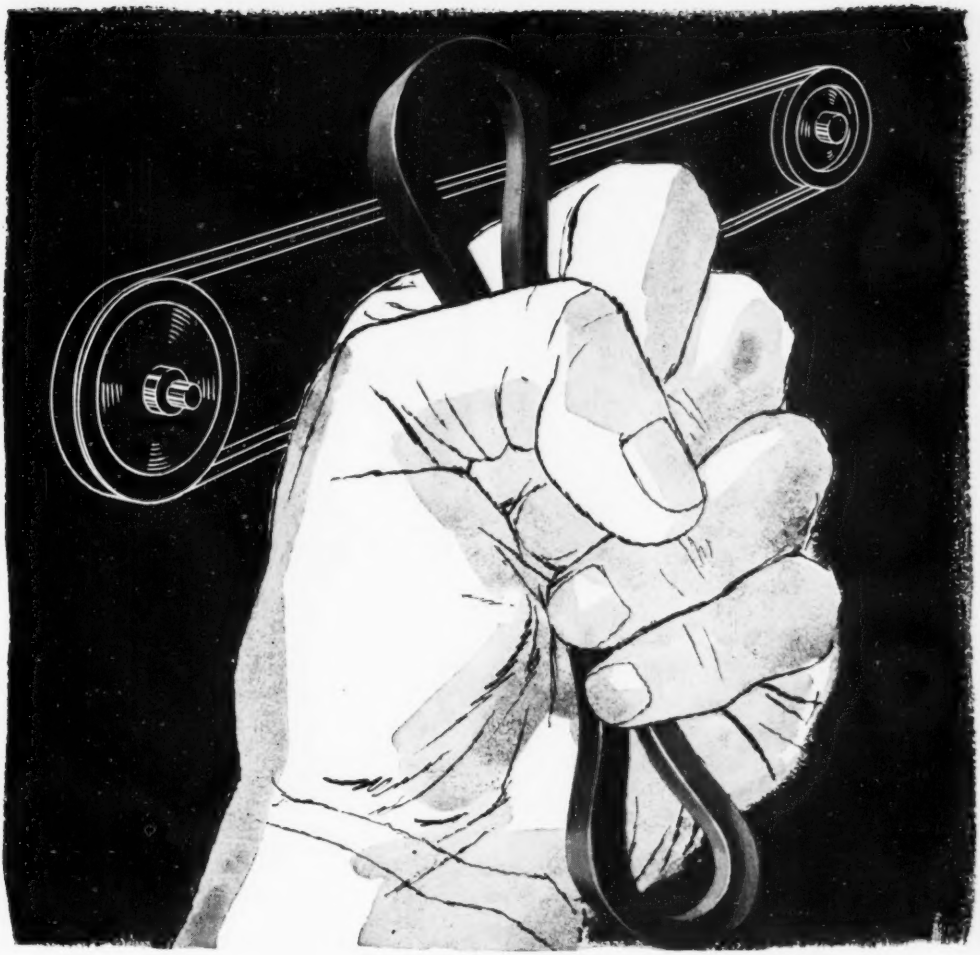
Conserve Manpower with Completely Mechanized Scrubbing

FINNELL SYSTEM, INC.

Originators of Power Scrubbing and Polishing Machines

Everything FINNELL for Floor Care

BRANCHES IN ALL PRINCIPAL CITIES



Why U. S. Rubber V-belts *are so rugged*

THE unique Equa-Tensil Cord Section in a U. S. Rainbow V-belt brings together in a balanced unit the concentrated strength of the multiple pulling cords, distributes the pulling of the load so evenly among the cords that each carries its full share. This "U.S." principle produces a belt that absorbs shocks with cushioned smoothness.

U.S. Rainbow V-belts stand up longer under constant flexing because the cords are treated with latex. The stretch is worked out before the belt leaves the factory. Protective jacket prolongs wear still further by keeping out dirt. "U.S." engineers will compound belts with special properties to withstand conditions not usually found on the average drive —oil, high temperatures, generation of static electricity, to name but a few.

Order from your jobber or write to address below.

HITCH YOUR DRIVE TO A U. S. RAINBOW V-BELT

PRODUCT OF U.S.RUBBER SERVING THROUGH SCIENCE

UNITED STATES RUBBER COMPANY

MECHANICAL GOODS DIVISION • ROCKEFELLER CENTER, NEW YORK 20, N. Y.

46

Years

★

AS
CONTRACTING ELECTRICAL ENGINEERS
TO THE TEXTILE INDUSTRY

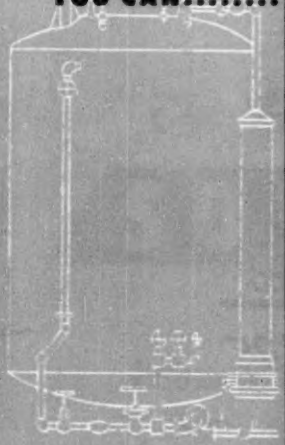
★

J. M. CLAYTON COMPANY
Contracting Electrical Engineers
ATLANTA, GEORGIA

IN

KIER BOILING COTTONS

YOU CAN.....



CUT CAUSTIC SODA CONSUMPTION

REDUCE BLEACH REQUIREMENTS AND BOILING TIME

BY ADDING AS LITTLE AS 4-5 LB.

Nacconol*

AMERICA'S LEADING SYNTHETIC DETERGENT

PER 1000 LB. OF COTTON IN THE KIER

In the mill as well as the laboratory, extensive tests now show that 4 to 5 pounds of NACCONOL per 1000 pounds of cotton kiered in a ½% Caustic solution for 3½ hours can:

1. **Reduce Caustic Soda consumption as much as 24%**
2. **Reduce bleach requirements as much as 17%**
3. **Double the absorbency of the kiered cotton**

Previously reported results all showed that the addition of NACCONOL to the kier liquor reduced alkali consumption, bleach requirements and boiling time. Now the optimum alkali and NACCONOL concentrations for most efficient results are clearly established by careful tests.

We will be pleased to work with you to cut kiering costs in your mill by the most efficient use of NACCONOL for your cottons.

NATIONAL ANILINE DIVISION

ALLIED CHEMICAL & DYE CORPORATION

40 RECTOR STREET, NEW YORK 6, N.Y. • BOwling Green 9-2240

Boston 14, Mass., 150 Causeway St.	CApitol 7 0490	Richmond 19, Va., 8 North Fifth St.	Richmond 2 1930
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Philadelphia 6, Pa., 200-204 S. Front St.	LOmbard 3 6382	Greensboro, N.C., Jefferson Standard Bldg.	GReensboro 2 2518
San Francisco 5, Cal., 517 Howard St.	SUtter 1 7507	Chattanooga 2, Tenn., James Building	CHattanooga 6 6340
Portland 9, Ore., 730 West Burnside St.	Beacon 1853	Atlanta 2, Ga., 254 E. Paces Ferry Rd.	CYPress 2821
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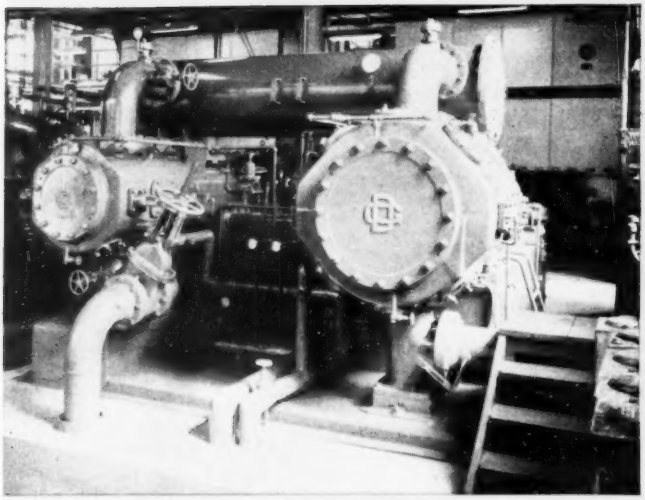
*Reg. U.S. Pat. Off.

SEND FOR TECHNICAL BULLETINS 312 AND 3125

These two technical bulletins contain 13 pages of helpful test-data that show how variations in alkali concentrations, boiling times and NACCONOL additions effect the consumption of chemicals, and the cleanliness and absorbency of the finished cotton. These results will be helpful to any mill man concerned with the cost of kiering raw cotton or cotton piece goods. For your copies of these bulletins, write or phone our nearest office.



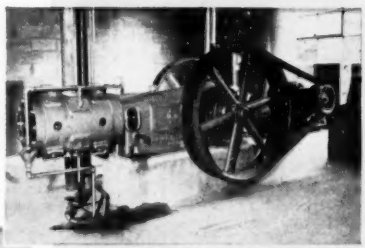
Pin Money Maintenance!

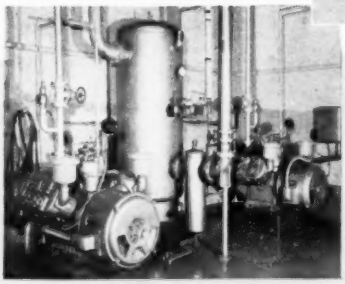
That's all it takes to keep a Gardner-Denver HA Compressor puffing away at top efficiency. One HA, for example, has been handling the full air load in a southern foundry and manufacturing plant for eight years—and has required only $10.00 for maintenance. That's $1.25 a year!

How come? A look at the soundly built power end and the reliable lubricating system will give you some of the answers.

And how about operating costs? They're unusually low, too—thanks to Gardner-Denver correctly designed air cylinders and low-lift "Air Cushioned" valves.

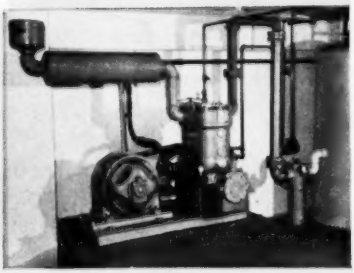
Another dependable compressor —the Gardner-Denver RX.





Space-saving efficiency—with Gardner-Denver WB Compressors.

For low-cost compressed air in any volume—choose Gardner-Denver Compressors. Write today for full details.



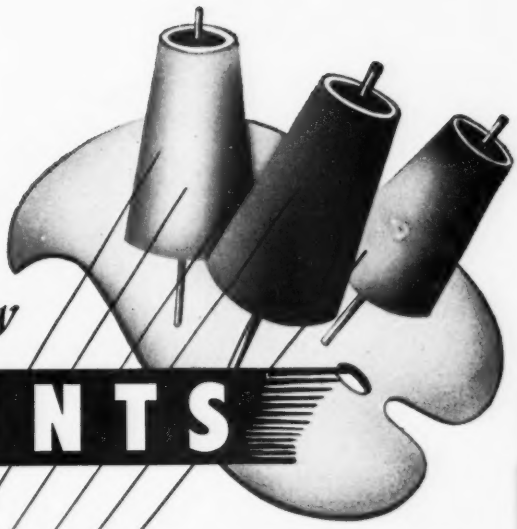
For continuous service— Gardner-Denver AA Compressors.

SINCE 1859

GARDNER - DENVER

Gardner-Denver Company, Quincy, Illinois
In Canada:
Gardner-Denver Company (Canada), Ltd., Toronto, Ontario
Atlanta, Ga.; Birmingham, Ala.; Knoxville, Tenn.; Washington, D. C.; New York, N. Y.; Philadelphia, Pa.; Pittsburgh, Pa.; New Orleans, La.

THE QUALITY LEADER IN COMPRESSORS, PUMPS AND ROCK DRILLS



The Amazing New

SOLUTINTS

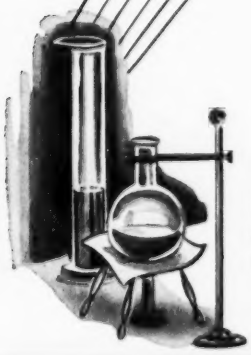
Economical Fugitive Tints for Low Cost Operations

Another
BORNE, SCRYMSER
First!

To satisfy the pressing need for efficient fugitive tints in the medium price range — Borne, Scrymser has developed SOLUTINTS.

SOLUTINTS are a series of fugitive tints that provide identification, lubrication, and improved processing of all natural and synthetic fibres. In addition to giving maximum tinctorial strength — SOLUTINTS combine controlled moisture retention with improved scourability.

Have the Borne, Scrymser representative give you all the facts. You'll find for low cost operations that SOLUTINTS are second to none.



BORNE SCRYMSER Since 1874

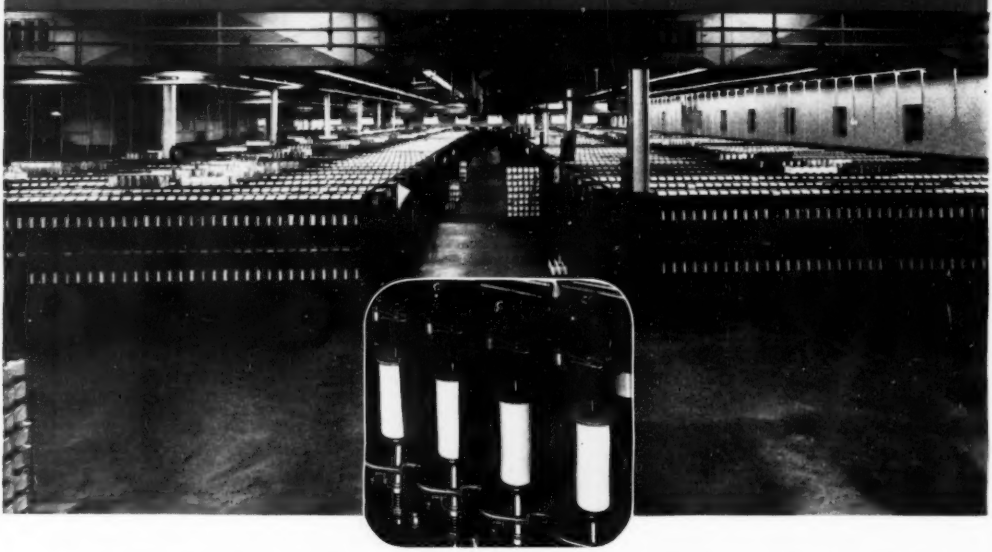
Our Laboratory Facilities are always at your disposal

BORNE, SCRYMSER COMPANY
Elizabeth, N. J.
Charlotte, N. C.

Marquette ROLLER BEARING SPINDLES

with FULL-FLOATING FOOTSTEP BEARING

for all textiles COTTON RAYON NYLON WOOL WORSTED



Starting in 1946 with a single test frame of Marquette Spindles, this mill now has more than 21,000 in operation.

Not only here, but *in other mills where they have been tested,* Marquette Spindles have demonstrated their ability to produce MORE YARN at LOWER COST. They operate efficiently at high speeds with large packages, and give important savings in power consumption and maintenance.

We'll be glad to arrange for a test installation to prove that Marquette Spindles can accomplish the same results in *your* mill. Contact our home office or one of our representatives.

The Marquette METAL PRODUCTS COMPANY

CLEVELAND 10, OHIO • SUBSIDIARY OF CURTISS-WRIGHT CORPORATION

Representatives: C. H. WHITE, 2300 ROSWELL AVE., CHARLOTTE, N. C.; WILLIAM P. RUSSELL, BOX 778, ATLANTA, GA. JOHN J. HALLISSY, 58 LIVINGSTON AVE., LOWELL, MASS.; HARRY KING, GREENVILLE, S. C.

Also Manufacturers of: HYDRAULIC GOVERNORS • FUEL OIL PUMPS • PRECISION PARTS AND ASSEMBLIES WINDSHIELD WIPERS FOR AIRCRAFT, TRUCKS AND BUSSES • FUEL OIL INJECTORS

Textile Industries
Vol. 116 • April 1952

News in Brief

Canadian Seminar Date Changed. The third Canadian Textile Seminar will be held at Queen's University, Kingston, on September 11-13, 1952, instead of September 18-20 as previously announced. Registration is scheduled for the evening of September 10.

Wool Price Support Through Loans. The price support program on shorn wool in 1952 will operate through a loan program rather than a purchase program as in recent years, the U. S. Department of Agriculture has announced. The average level of support has been announced previously at 90 per cent of parity. Since 1943, wool prices have been supported through purchase operations by the Commodity Credit Corporation.

"Nylonated" Rayon. Some rayon goods finished by Brewster Finishing Co. are "Nylonated." The fabrics are said to be treated with a nylon-resin which reportedly imparts to the cloth some of the characteristics of nylon.

ASME Membership for Textile Engineers. Recent proposals to form a separate organization for textile engineers has prompted the American Society of Mechanical Engineers to consider changes to include graduate textile engineers in its membership.

OPS Warns of Wage Promises. OPS has issued a warning to employers against granting unauthorized increases in salary and other compensation to their employees by contract or informal understanding whereby such increases are to be paid after salary stabilization is terminated. Where employers have put funds into escrow for future payments, they will be considered as salary increases effective immediately.

Square Heddle Eyes. Square heddle eyes are being used in weave rooms of several synthetic plants. Initial trials, according to management, indicate less downtime. Here's why. Mill men say the top and bottom of eyes don't groove due to greater surface offered warp end. Knots pass through with ease, yarn doesn't chafe or cut, and coarser deniers can be drawn through eye of used heddles without causing chokes.

Shhhhh! A Holyoke, Mass., electronics expert has devised a public address system for a local weaving mill so that voice signals can be heard above the noise level of the weave shed, though loud-

Contract Signed for Tabulation of Dyestuffs

The AATCC has signed a contract with the British Society of Dyers and Colourists for the publication of the Colour Index, a study and tabulation of all dyestuffs and their properties commercially manufactured in the U. S., Great Britain, France, Germany, Switzerland, and other countries of the world. The project involves about $250,000 in costs, and the first printing will be ready for distribution in 1953. AATCC president C. Norris Rabold, Erwin Mills, Inc., and secretary Dr. Harold C. Chapin, Lowell Textile Institute, signed the contract for the association.

I'm no Peeping Tom . . . I'm just trying to get a glimpse of this new dye, bleach and boil-off machine for tricot, marquisette, lace and all open weave fabrics. Boy, is it sensational!

For Details Contact

Burlington ENGINEERING COMPANY, INC.
TELEPHONE 6-4478 BURLINGTON N.C. **GRAHAM, N.C.**

speaker volume is low. Pitch and frequency characteristics of the new set provide the means. The public address system comes as a welcome relief to employees. It will replace this mill's klaxons whose sudden ear-splitting emissions have already caused one heart attack.

Graduate Fellowship at N. C. State. The Celanese Corporation of America has established a graduate fellowship in the School of Textiles at North Carolina State College. The fellowship will carry an annual stipend of $1,800 with an additional amount to the School of Textiles for tuition, fees, and supplies used in the textile research.

Booklet Describes Mooresville Mills. "About Mooresville—What It Can Mean To You," a two-color, illustrated booklet issued by Mooresville Mills, provides an "inside" look into the operations of the mill. Copies of the booklet are available from the Sales Promotion Department, Mooresville Mills, Empire State Building, New York.

S. C. Textile Manufacturers' Meet. The South Carolina Textile Manufacturers' Association will hold it's annual convention at The Cloister, Sea Island, Ga., May 29-31.

Dark Colors on "Orlon." Central Yarn & Dyeing Co., Gastonia, N. C., is now able to package dye filament "Orlon" acrylic fiber in dark shades of navy, brown, and black. Heretofore crocking has interfered with successful dye application in obtaining dark colors.

N. C. Mill Accidents Increase. A summary of the North Carolina Industrial Commission indicates that most branches of the textile industry in North Carolina showed an increase in the number of accidents in January 1952 as compared to December 1951.

Soften Hosiery Bags. Having trouble with snags and pulls in full-fashioned hosiery due to rough textured net bags? The roughness comes from a build-up of resin type hosiery finishes. Prescribed remedy is to scour these bags. Then finish with a cationic softener which will yield a soft hand to the net.

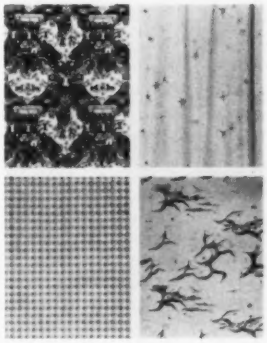
To Stop Textile Mill Attraction. Representative George M. Rhodes (D., Pa.) has introduced a bill (HR 6785) designed to prohibit shipment in interstate commerce of any goods produced in a factory or other premises leased from a state or political subdivision.

Duty-Free Imports for Textile Schools. The Senate has passed and returned to the House a bill (HR 1012) to permit textile schools and other educational institutions to import certain textile machinery without paying import duties.

Anti-Static Rinse for Synthetic Fabrics. Freedom from the an-

News in Brief

Fiberglas Drapery Market Expanded



Laverne Originals, internationally known designer group, has unveiled a line of 80 different Fiberglas drapery handprint combinations. The collection of prints, many of which have won top design awards, will be marketed nationally through department stores at between $5.50 and $6.00 a yard.

Heretofore, Fiberglas drapery materials have been sold only through decorators and principally to hotels, office buildings, restaurants, theaters, and other institutions.

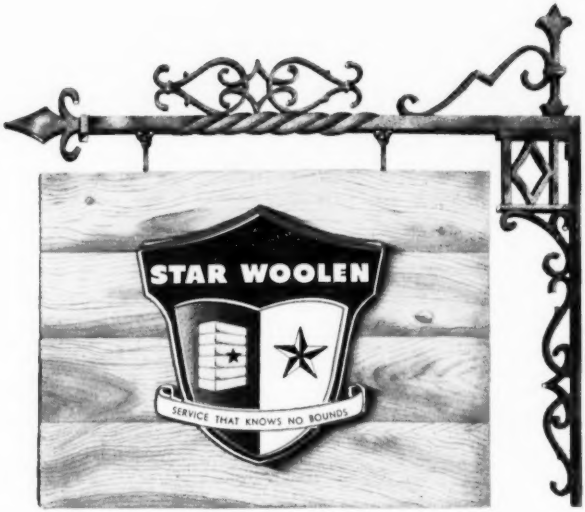
Notable among the present collection are "Fugue" and "Daystar," currently included in the Museum of Modern Art's Good Design Show; "Squared Circle," chosen for inclusion in a previous show of the same museum; and "Fun to Run," which won awards from the Metropolitan Museum of Art and the American Institute of Decorators.

Easter Seals Help Crippled Children

Baseball on crutches is real fun for Jack, who couldn't play such vigorous games with his friends until he received Easter Seal services, including a summer at a special camp for crippled children. Your Easter Seal contribution helps provide these health-building services for hundreds of boys and girls like Jack.

The Easter Seal Appeal is scheduled for March 13th to April 13th.

Lend a helping hand—Buy Easter Seals.



Sign of Service..... Dependability..... Quality Control
...in Textile Fibres and Synthetic Garnets

At Star Woolen garnetting is more than a mere processing of textile wastes. It is an exact science, carefully controlled by constant laboratory analysis to produce quality materials to YOUR specifications, whether your requirements call for wools, any of the new synthetics, or blends. Add Star Woolen's reputation for dependable service and you'll discover, as have producers throughout the world, why this familiar sign is the mark of excellence and economy in textile fibres.

Free Laboratory Analysis of Your Fibres

To assist you in controlling quality utilizing blended fibres, and to assure correct labeling, Star Woolen Co. offers you the facilities of its outstanding, newly enlarged research laboratory for fibre analysis, without cost or obligation.

WRITE TODAY FOR FREE DESCRIPTIVE FOLDER 52B

STAR WOOLEN co.

Cohoes, New York

noyance of static electricity in clothing is, according to reports, now possible through the use of an electro-chemical rinse concentrate which banishes static generation in most synthetic fibers, such as nylon, "Dacron," "Orlon," and dynel. Marketed through drug and department stores, etc., for household use, "Nul"—added to after-wash rinse water—puts an end to the skin-prickling sensations caused by electrostatic charges which build up in garments made of synthetics. Manufacturer: Electro-Chemical Products Corp., 60 Franklin St., East Orange, N. J.

Dyestuff Plant in India. The Indian textile industry now has its own major source of dyestuffs. American Cyanamid Company officials have been cooperating with Indian financiers, including Indian cotton textile interests, in opening a dyestuff and pharmaceutical plant at Bulsar, near Bombay.

Textile Institute Activities. To promote the international aspects of its work, the Textile Institute has established an International Relations Committee. John Boulton, F.T.I. (Courtaulds Ltd., Droylsden, Manchester) is chairman. The Institute's 37th annual conference will be held at Edinburgh, Scotland, June 2-6, 1952. The subject to be discussed is "Fiber Blends."

Boy Scouts Learn Textiles. The Merit Badge for Textiles has been earned by 25,818 Scouts. In qualifying, Scouts must be familiar with the production and properties of raw and finished cotton, wool, worsted, silk, and synthetic fibers.

An Ounce of Prevention. A T-shirt knitter is insuring himself against yarn feed and pattern errors by mounting a sample swatch of a repeat of the pattern being knitted on a "reminder" board fastened to the machine. Operatives have a readily available standard to check against in case of doubt.

Prevent Tricot Yarn Waste. Here's a way one tricot mill prevents yarn waste. The objective is to finish out upper and lower beams simultaneously in order to eliminate leftover yarns on any of the beams. During warping, a slip of onion skin paper noting the yardage indicated by counter is inserted in the warp at regular increments of one of the top beams and one of the bottom beams of a set. A constant watch is kept on quality during knitting. The markers in the beams serve notice of any changes in the run-out ratio. Adjustments in tension are made accordingly.

News in Brief

Wool Manufacturers May Reorganize. A proposal for reorganization has been approved by the executive committee of the National Association of Wool Manufacturers.

Textile Show in Spartanburg. The first industrial exposition in Spartanburg, S. C. textile manufacturing area will be held April 14-19 in the city's new $1,200,000 Memorial Auditorium. Approximately 50 manufacturers of textiles will participate. The magnitude of the Greater Spartanburg area's 43 textile plants is to be demonstrated at the exposition.

Stocking Exchange. In Frankfurt, Germany, recently a retail trader inserted an advertisement in the local daily papers offering a pair of new stockings in return for an old pair and cash adjust-

(*Continued on page 236*)

Gear-Driven Spinner Handles 1-1/2" to 9" Fibers

A "Perfect" spinning machine with 320 gear-driven spindles instead of the conventional tape drive has been installed by American Viscose Corporation in its Textile Research Department at Marcus Hook, Pa. The machine has been in service since before the last war in several countries in Europe, but it is new in this country and has recently been improved. The spinning machine was formerly made in Switzerland and some years ago in Germany.

It is designed to handle 100 per cent rayon, rayon and natural fiber blends, or 100 per cent worsted yarns in lengths

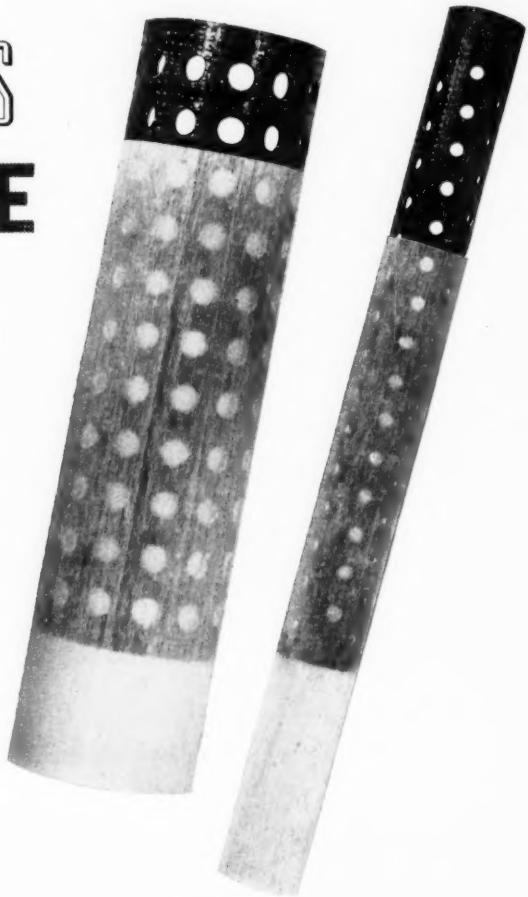
ranging from 1½ to nine inches. The drafting element is composed of a "broad apron" with carrier rolls, and the center section is so designed that it is easily adjusted to handle various lengths of staple. The broad apron covers six or more spinning positions according to the gauge of the frame. This arrangement facilitates cleaning and allows the spinning of various staple lengths to a better and more even yarn.

The machine is said to provide draft as high as 27-to-1. Draft and speed can be changed quickly, by what amounts to a push-button arrangement.

Rx FOR BETTER PACKAGE DYEING

SONOCO'S DYTEX® TUBE WITH PLASTAVON SLEEVE

As a result of constant research and improved production facilities, the Dytex Tube is better than ever. Designed for one time use, the Sonoco Dytex Tube is a proven yarn carrier for all standard forms of package dyeing. Standard sizes 5/8" I. D. x 6 3/4" long and 1 5/8" I. D. in varying lengths. Special sizes available.



A filter sleeve that also breaks up jet action to allow more even dye distribution next to the tube and better control of "flow" throughout the entire package of yarn, reduced slippage in primary winding.

Precision Paper Products

sonoco — ROUND THE WORLD — PAPER CARRIERS — REG. U.S. PAT. OFF.

SONOCO PRODUCTS COMPANY

MYSTIC CONN. | HARTSVILLE S. C. | BRANTFORD ONT.

DEPENDABLE SOURCE OF SUPPLY

AN EXECUTIVE Views

THE NEWS IN TEXTILES

Prepared by a man who is closely identified with the textile industry.

The Distressed Areas

A GREAT hue and cry has been going up over certain parts of the country because of excessive unemployment, and this commotion has at last reached Washington. The result has been that those who sit in the high places have ruled that defense contracts may be given to the industries or areas which are in economic distress, without regard to competitive prices. At least that seems to be the effect of the various confused rulings which have emanated from Bagdad on the Potomac.

One version of the situation which is current as this is being written is that some sort of special Commission will be appointed, and that the task of this Commission will be to designate "distressed" areas. Such a designation would then be transmitted to appropriate defense agencies, and these agencies would be obligated to allot contracts where most needed.

This, in the final analysis, boils down to the old question of just whose ox is gored. If you are "distressed" you will probably think this is a splendid thing and if, upon the other hand, you think you might not be designated as "distressed" then you are likely to feel that this is an insidious and vicious plan to destroy your mill.

It is difficult to view this question objectively because of the tremendous amount of smoke which has been generated, but maybe we should look at it from the standpoint of the basic principle involved.

Does this not go back to the question of how much government there should be in business?

In such countries as England, of course, this question has virtually been answered, and in that unhappy country few industrialists can sharpen a pencil without the approval of government. There are some people who feel that America is well on the road to that same condition.

If we will be honest with each other, this writer feels that we must admit that placing defense contracts for any reasons other than price bids is uneconomic, unfair, and another step toward bureaucratic government. The only possible exception that we can think of would be a situation in which the necessity for speed might over-ride the element of price, but that is not the question currently being considered.

If we are going to encourage the awarding of contracts based upon the degree of unemployment, we are merely going to move the burden from one shoulder to the other. We are not going to lighten the load. We are, however, going to increase the cost of the defense program, because we are going to let contracts without regard to prices. We are going to open the door wide to exploitation and political chicanery and we, as taxpayers, are going to have to pay the piper.

Remember WPA?

Somehow all of this has the old familiar scent of WPA. Remember WPA? We were told in Washington that WPA was going to save the country from the horrors of unemployment, but it turned out that most of these "horrors" showed up in states with the largest number of undecided electoral votes. In those days it was relatively certain that a select group of states could pretty well swing the national elections, and some of the more cynical members of our population rightfully or wrongfully felt that most of the WPA "gravy" went to those states.

That sort of thing could happen, of course, in this "distressed" area business.

Who is to say what a "distressed" area is? In one locality the mills may be running four days a week to provide a measure of employment for their employees, even though this may result in a net loss, and this might not look to a Commission as though it were as deserving of assistance as some other locality whose mills might be completely closed.

Generally, government "aid" seems to have a habit of filtering down to the groups with the greatest political influence, and if we are for placing government contracts for the purpose of relieving unemployment, then, to be consistent, we are going to have to favor numerous other types of government subsidy which, in the days past, we have viewed with genuine alarm. We cannot change sides just to be on the winning team.

Whether those who maneuver themselves into the position of deciding what is a "distressed" area realize it or not, they are going to have tough sledding and a lot of explaining to do once the decision has been made. This writer wouldn't want to be in that spot.

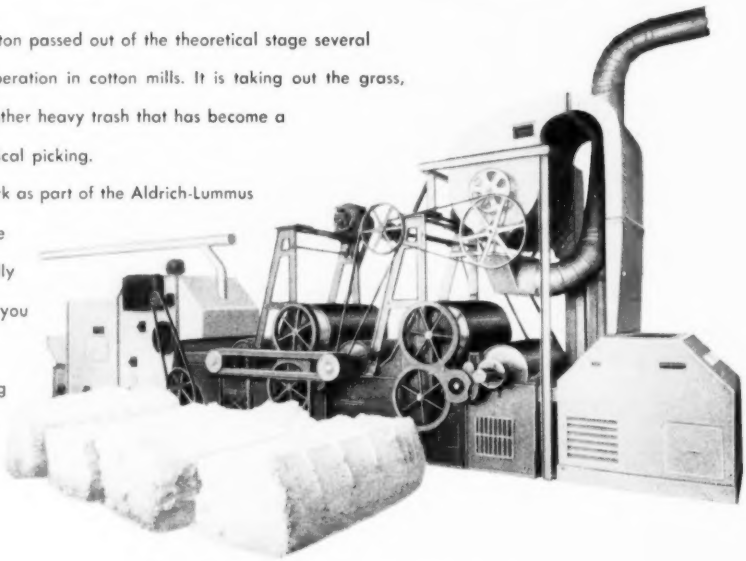
For instance, suppose New Eng-

SEE IT... NOW

Super-Jet air cleaning of cotton passed out of the theoretical stage several years ago. It is in actual operation in cotton mills. It is taking out the grass, leaf stems, bark, shale and other heavy trash that has become a problem because of mechanical picking.

You can see Super-Jet at work as part of the Aldrich-Lummus cleaning system. The mills are enthusiastic. They have gladly given us permission to invite you to visit them.

You will find that this cleaning system without moving parts does a thorough job of cleaning, using gentle streams of air.



You will see for yourself how it improves the spinning value of the cotton.

Let us know when it will suit you, and we will arrange a visit to one or several of these effective installations.

Made by
LUMMUS COTTON GIN CO.
Columbus, Ga.
and
ALDRICH MACHINE WORKS
Greenwood, S. C.

Sold and Installed by
AldricH MachinE Greenwood WorkS South Carolina

ALDRICH-LUMMUS CLEANING SYSTEM

land is declared a distressed area because the yarn and cloth mills are operating slow time, and government contracts are placed there for this reason. The hosiery industry has been especially ill in the past months—and in their own eyes the members of this industry may feel that it should be declared in a state of distress also. But since over seventy-five per cent of the seamless hosiery is produced in the South, is the Commission going to decide New England is distressed in yarn or cloth manufacturing, and the South is distressed in making socks?

This sort of thing could go on without limits, with hog raisers getting distressed now and cattlemen being distressed later. Thus the armed forces would be eating pork for months on end, until beef men beefed enough to get declared distressed.

Some day some smart politician is going to wake up to the fact that he has his hands full running his own job, without trying to run everything from the smallest hot dog stand to the biggest textile and steel and electric power organizations in the country—we hope. Such a politician would remain in office forever!

New Cotton Picker

Farmers in the Carolinas, Georgia, and Alabama have complained for sometime that it was getting harder for them to compete with western farmers in the raising of cotton. One reason they have cited is that mechanical cotton pickers are so heavy that they are impractical to use except on very flat land. They have also complained that mechanical pickers were too expensive for the average small farmer of the Seaboard States, and that the huge cotton fields of Texas, Oklahoma, and California could beat them in the competitive race because of this factor.

It appears, however, that there may be some hope for them if a new, light cotton picker, whose construction a Georgia inventor has announced, proves to be efficient. This new picker is said to weigh approximately 600 pounds. It was developed at Experiment, Georgia. The same inventor who perfected the 600-pound machine is also working on a combine which he hopes will both pick and gin the cotton as it moves through the field.

Big things are happening and maybe cotton is going to turn up one of these days with an atomic-powered reaper which will pick, gin, card, spin, and weave without leaving the farmer's field. When that day comes maybe some sort of small attachment can be added which will also interpret government regulations.

April 16-17—Spring meeting, **Fiber Society,** Clemson House, Clemson, S. C.

April 16-18—Annual convention, **Cotton Manufacturers Association of Georgia,** Boca Raton Hotel and Club, Boca Raton, Fla.

April 18—Spring meeting, Textile Processing Sub-Committee, **American Society for Quality Control,** Georgia Institute of Technology, Atlanta, Ga.

April 18—**New York Section, AATCC,** Swiss Chalet, Rochelle Park, N. J.

April 21-25—**Knitting & Allied Crafts Exposition,** Grand Central Palace, New York City.

April 22-23—Annual convention, **National Knitted Outerwear Association,** Waldorf-Astoria, New York City.

April 24—Annual meeting, **Underwear Institute,** New York City.

April 24—**Northern Textile Conference,** sponsored by Textile Committee, American Institute of Electrical Engineers, Engineers Club, Philadelphia, Pa.

April 25-26—Annual meeting, **Canadian Association of Textile Colourists and Chemists,** Mount Royal Hotel, Montreal, Quebec, Canada.

April 26—Spring meeting, **Textile Operating Executives of Georgia,** Georgia Institute of Technology, Atlanta.

May 1-3—49th annual convention, **Phi Psi Textile Fraternity,** Clemson House, Clemson, S. C.

May 2—Spring meeting, **Georgia Section, American Society for Quality Control,** Georgia Institute of Technology, Atlanta, Ga.

May 3—**Piedmont Division, STA,** Belmont, N. C.

May 4-6—North Carolina State-Wide **Industrial Safety Conference,** auspices North Carolina Industrial Commission, George Vanderbilt Hotel, Asheville, N. C.

May 6-9—International **Lighting Exposition and Conference,** Cleveland Auditorium, Cleveland, Ohio.

May 5-16—**British Industries Fair,** Earls Court and Olympia, London; and Castle Bromwich, Birmingham, England.

May 12-17—**National Cotton Week,** sponsored by National Cotton Council.

May 15-17—**Third annual convention, American Cotton Manufacturers Institute, Inc., Haddon Hall Hotel,** Atlantic City, N. J.

May 15-17—Annual outing, **Carolina Yarn Association,** Carolina Hotel, Pinehurst, N. C.

May 22-24—Annual meeting, **American Society for Quality Control,** Syracuse N. Y.

May 29-31—Annual convention, **South Carolina Textile Manufacturers' Association,** The Cloister, Sea Island, Ga.

June 2-7—Annual conference, **Textile Institute,** Assembly Hall, Edenburgh, Scotland.

June 12-14—Annual meeting, **Southern Textile Association,** Ocean Forest Hotel, Myrtle Beach, S. C.

June 23-27—Annual meeting, **American Society for Testing Materials,** Hotels Statler and New Yorker, New York City.

Sept. 8-10—**Third National Standardization Conference,** sponsored by the American Standards Association, Museum of Science and Industry, Chicago, Ill. To be held in conjunction with Centennial of Engineering.

Sept. 9-13—**7th National Chemical Society Exhibit,** the Coliseum, Chicago, Ill.

Sept. 10-11—Fall meeting, **The Fiber Society, Inc.,** Princeton, N. J.

Sept. 11-13—Third **Canadian Textile Seminar,** Queens University, Kingston, Ontario, Canada. (previously scheduled for Sept. 18-20).

Oct. 6-11—**Seventeenth Southern Textile Exposition, Textile Hall,** Greenville, S. C.

Oct. 16-17—Annual convention, **The Quartermaster Association,** Biltmore Hotel, Atlanta, Ga.

Nov. 6-8—31st annual convention of the **American Association of Textile Chemists and Colorists:** also the textile dyeing and finishing exposition. Hotel Statler, Boston, Mass.

Nov. 19—34th annual meeting, **American Standards Association,** Waldorf-Astoria, New York, N. Y.

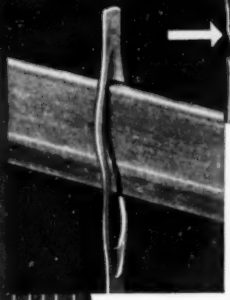
NOTE

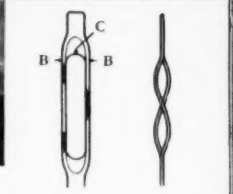
THESE IMPORTANT FEATURES

WALKER
DIVISION OF D DRAPER CORP.
ATLANTIC & RUTH STS. PHILA. 34, PA.

Superior Heddles & Heddle Frames

STAGGERED SCREWS connect double strength end brace without weakening shaft.

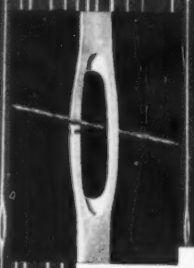




FREE RIDING SLIDE HOOKS for all silk type frames will not angle or bind—make warp fully self-adjusting.

LONG SERVICE LIFE because the heads of Walker Heddles fit the rods, permitting heddles to move freely in adjusting their position to the warp ends. Wear is concentrated at point "C" instead of vulnerable point "B"

WALKER
DIVISION OF D DRAPER CORP.
ATLANTIC & RUTH STS., PHILA. 34, PA.



REDUCED YARN CHAFING—even knots and slubs flow freely through the highly polished eyes of Walker Heddles. Note broad based cornerless eye shape.

NEW Equipment AND MATERIALS

High Temperature-Pressure Rotary Dyeing Machine for Synthetic Knit Goods

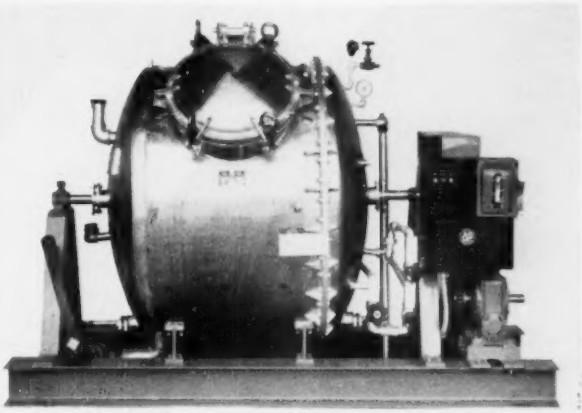
A rotary dyeing machine, especially designed for piece-dyeing "Orlon," nylon, and "Dacron" knitted goods, is now being used successfully by several hosiery mills, the dyeing machine manufacturer reports.

Special features claimed for the machine include: an enclosed dyeing chamber shut off from the atmosphere; faster indirect heating for dye bath; and extra-rigid construction.

Made of stainless steel, the equipment is said to operate successfully and safely at a high temperature range of 212 to 300 F and withstands the high pressures required. It may also be used with equal efficiency at conventional temperatures, the manufacturer states.

Gaston County Dyeing Machine Co., Stanley, N. C.

For additional data, request item D-703, using business reply card on page 258.



FOR DYEING HOSIERY made of "Orlon," nylon, and "Dacron," is this high temperature-pressure rotary machine (Gaston County). Models are available with capacities of 50, 100, and 200 lb.

High-Speed Warper Beam with 36″ Heads Holds 80% More Yarn

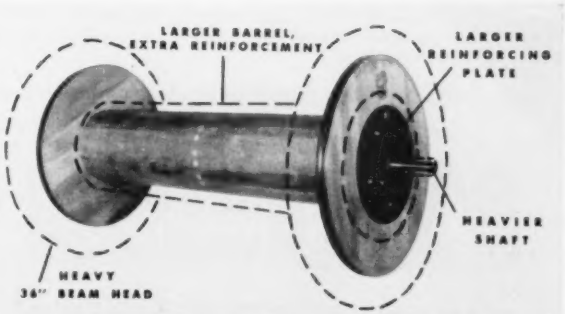
Approximately 80% more yarn can be wound on the new Series M warper beams with 36-inch heads, the manufacturer claims.

Heads are made of sawn sections of kiln-dried lumber combined to achieve a balanced, resilient, and distortion-free unit, with molded-on steel tire, according to the report.

Advantages claimed for the large-package, high-speed warper beam are: fewer beams required, less maintenance, less handling in the mill and in shipping, longer runs without beam changeover.

Allen Beam Co., New Bedford, Mass.

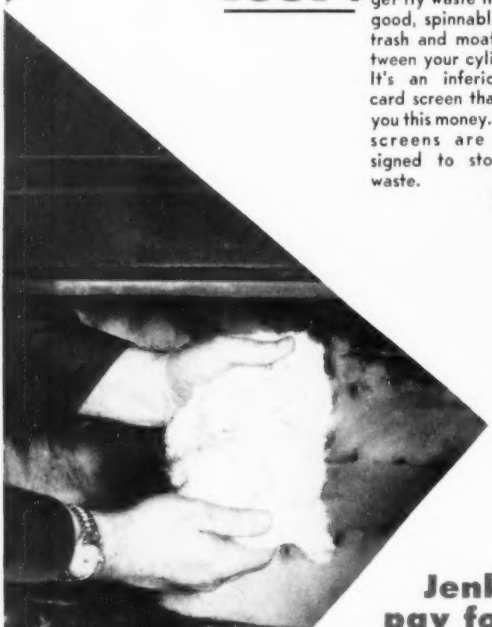
For additional data, request item D-701, using business reply card on page 258.

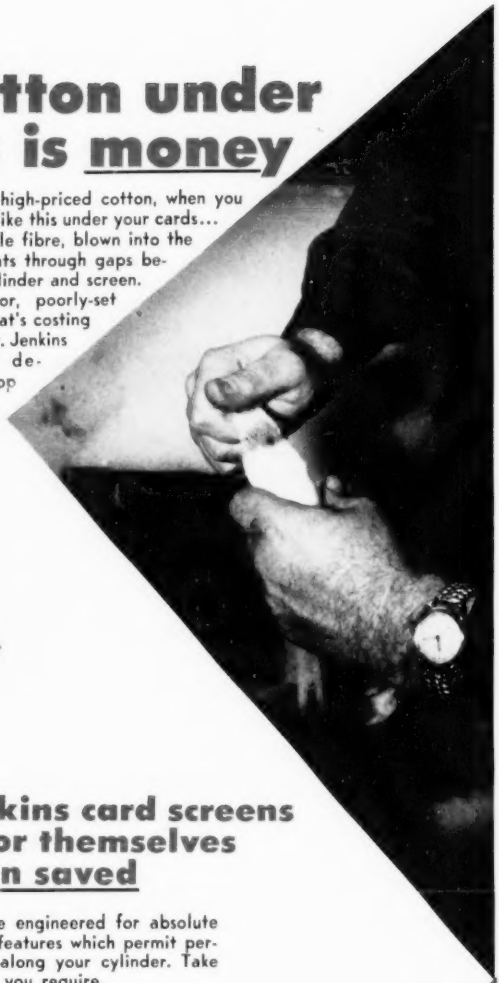


CONSTRUCTION FEATURES of Allen Beam Company's new Series M large capacity warper beam are shown here. It is heavier throughout, with larger barrels with cast iron hub extending through head.

good cotton under your cards is money lost!

You're losing high-priced cotton, when you get fly waste like this under your cards... good, spinnable fibre, blown into the trash and moats through gaps between your cylinder and screen. It's an inferior, poorly-set card screen that's costing you this money. Jenkins screens are designed to stop waste.



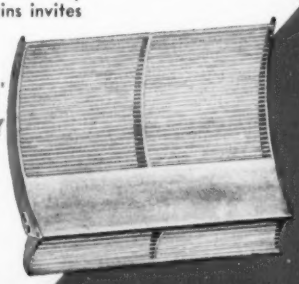


Jenkins card screens pay for themselves in cotton saved

Jenkins card screens are engineered for absolute uniformity, with patented features which permit perfect setting at every point along your cylinder. Take out as much or as little fly as you require.

Mill men who have compared Jenkins screens with ordinary screens *by actual test* report that in only one year's time they saved enough good cotton to pay for the screen! Jenkins invites you to make this test yourself, and be convinced of your savings.

ALL PARTS PRECISION MADE IN JENKINS' OWN SHOP FOR ABSOLUTE UNIFORMITY



JENKINS

ENGINEERED PRODUCTS

JENKINS METAL SHOPS, INC.
Gastonia, N. C.

High-Speed Weighing with Shadow Indication Scales

NEW Equipment AND MATERIALS

Frictionless shadow indication is the outstanding feature of Shadograph scales for use where high speed, precision weighing is required.

The projected shadow on the illuminated dial gives a true reading when viewed from any angle, the manufacturer claims; further, the combination of highly polished Brazilian agate bearings and induction-hardened tool steel knife edges assures extreme sensitivity and long-life accuracy.

Greater speed is said to be obtained through a reduction of lever movement and by the action of an adjustable damping device. Operation is quiet. Weighs accurately in any ordinary out-of-level condition, manufacturer states.

A scale that has proven useful in textile applications, such as the weighing of samples for Micronaire tests, is Model 4104. It has a 1500-grain capacity with 1 grain graduations.

WEIGHING COTTON SAMPLES with a Shadograph scale for tests on the Micronaire (Exact Weight).

Scales are available for operation on either a-c or d-c current.

The Exact Weight Scale Co., Columbus 8, Ohio.

For additional data, request item D-106, using business reply card on page 258.

Arilan Dyes for Wool

A new line of metallized acid dyes for wool is available. Known as Arilan dyes, these new products provide brilliant shades of excellent all-

(Continued on page 203)

Shuttle Truing Machine Useful for Other Purposes

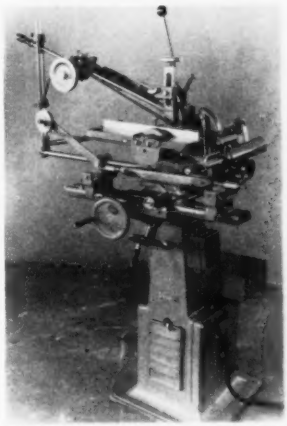
Now available in the United States is the Staubli shuttle truing machine which, according to the announcement, performs the following operations:

1. Dimensions shuttles accurately and alike.
2. Grinds and polishes shuttle points to exact original taper.
3. Equalizes angles and thickness of shuttle; also height of shuttle points.
4. Mills shuttle sides to smooth, new surface.
5. Cuts grooves and slots into shuttles, shuttle box fronts, and reed frames.
6. Machines wooden fronts and backs of shuttle boxes.
7. Resharpens cutter knives while installed on cutter.
8. Can be used for planing, drilling, and polishing operations in general.
9. Pirn rectifying device turns old bobbins to a true round.

According to reports, it saves pickers and reeds, helps prevent throwing out of shuttles, and contributes to safe and smooth loom operation.

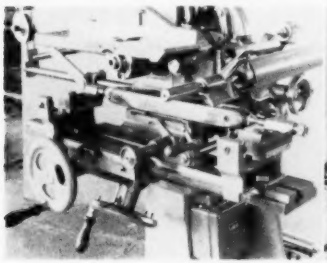
H. J. Theiler Corp., Whitinsville, Mass.

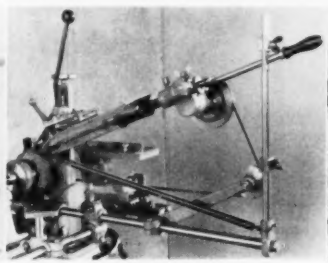
For additional data, request item D-105, using business reply card on page 258.

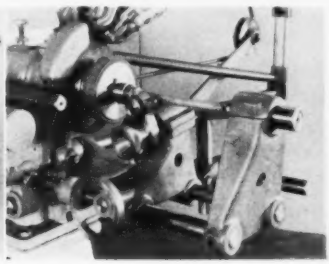


Shuttle truing machine (Theiler).

CLOSE-UP PHOTOS OF MACHINE IN OPERATION. Left, milling shuttle (milling guard removed for better visibility); center, grinding shuttle points; right, truing up filling quill.







First Choice!

and no wonder...

. . . The Dayco Cot's "super" fiber repellence makes it a big hit with millmen—no matter what fibers they're spinning! For whether you spin cotton, wool, blends or synthetic fibers, you'll find the Dayco Cot means fewer lap-ups, fewer ends down, cleaner yarn. And its better wearing qualities make it *outlast* any ordinary roll covering you've ever used.

Here's what *users* say: "Already outlasted the type of cot we were using, and good for years more" . . . "roll replacement is minimized" . . . "They spin perfect yarn right from the go, even on Monday morning startups!"

© D. R. 1952

Dayton Rubber

Since 1905

TEXTILE PRODUCTS FOR BETTER SPINNING AND WEAVING

See for yourself—**put Dayco Cots on your frames, for the long pull ahead. Ask your salesman or: Dayton Rubber Co., Textile Div., Woodside Bldg., Greenville, S.C.**

Shorts and Remnants

Orchids to Rep

". . . . would like to commend your Mr. Paul Platzman for his interest in attending the Carders Guild, and the fine reporting he is doing on the meetings. If it is possible, can you send me six copies of Mr. Platzman's report of the meeting of the Carders Guild, as printed on pages 136 and 137 of the January issue. . . . "

WM. F. NEUMANN
Secretary
Carders Guild
National Assn. Woolen & Worsted Overseers

The Chart

"We would like to have one of your charts listed on page 89 [Feb.] in your magazine. . . . "

W. W. MORRELL
Superintendent
Roxboro Cotton Mills
Roxboro, N. C.

► Chart, "The American Textile Industries," contains the forty type classifications of the broader textile industry. It will be sent to those requesting it, so long as the supply lasts.

Resolution of Thanks

From the Advertising Council comes a resolution of thanks to the National Association of Magazine Publishers for donated space to promote the sale of U. S. Defense Bonds. The resolution points out that in performing this public service the magazine publishers demonstrated the ability of advertising to contribute to our country's welfare and helped to develop a wider general awareness of advertising's value and responsibility.

TEXTILE INDUSTRIES is a member of the National Association of Magazine Publishers and regularly cooperates in donating space for the sale of U. S. Defense Bonds and other projects sponsored by the Advertising Council, Inc.

Partial Acetylation

"Is it possible to obtain reprints of the article in January 1952 TI entitled 'Partial Acetylation of Cotton.' "

E. C. JACKSON
Pacific Mills
Lyman, S. C.

► Reprints available from Southern Regional Research Laboratory, New Orleans, La.

Instruments and Slashers

". . . . shall be much obliged if you send me copy of 'Increasing Mill Production through Effective Instrument Maintenance' by E. A. Murphy, and 'Modern Slasher Drives' by your staff. . . . . "

TEAJ SINGH
Lakshmiratan Cotton Mills
Kanpur, India

► Reprints of both are available.

They Who Labor

The numerous associations and technical meetings in the textile industry invariably call for much preparatory work—usually by one person or a small group. To those whose labors oft go unnoticed, we dedicate the following poem:

Will a Secretary Go to Heaven?

If a secretary writes a letter, it's too long.
If he sends a postal, it's too short.
If he doesn't send a notice, he's lazy.
If he attends a committee meeting, he's butting in.
If he stays away, he's a shirker.
If he duns a member for dues, he's insulting.
If he fails to collect dues, he's slipping.
If he asks for advice, he's incompetent.
If he does not, he's bullheaded.
If he writes reports complete, they're too long.
If he condenses them, they're incomplete.
If he talks on a subject, he's trying to run things.
If he remains quiet, he's lost interest in the meetings.

Ashes to ashes,
Dust to Dust.
If others won't do it,
The Secretary must.

—Highway Builder

Knitting Quality Control

". . . . assigned me to quality control in connection with full-fashioned hosiery . . . . have your handbook . . . . search for additional information. . . . . "

D. REID BROWN
Standard Hosiery Mills
Burlington, N. C.

Tar and Tar Spots

". . . . decide to purchase about 30 copies of 'Tar Spot Report' . . . . March issue . . . . like to send this article to our cotton shippers. . . . "

MANAGER
Martha Mills
Silvertown, Ga.

". . . . have come into possession of your preprint on 'Tar Spot Report' by G. Dent Mangum, Jr., and George S. Buck, Jr. . . . . would like to have about two dozen copies of this article. . . . . "

E. W. CARPENTER
Cotton Department
Greenwood Mills
Greenwood, S. C.

". . . . please send a half dozen copies of your pamphlet entitled 'Tar Spots are With Us' (a reprint) . . . . "

H. E. TROTTER
Jones, Gardner & Beal, Inc.
Providence, R. I.

► TI got tar spot conscious (along with numerous cotton mills) and published much on the subject. Reprints are available.

"Waste" Now Available

"Please send us if possible 12 reprints of 'Waste Reduction and Control' (October 1948 issue) . . . "

J. R. SWEETENBERG
General Supt.
Wellington Mills, Inc.
Gluck Mill Div.
Anderson, S. C.

". . . would like very much to receive . . . copies of the article entitled 'Waste Reduction and Control' by Ben H. Crawford. . . "

V. O. ROBERSON, Jr.
General Manager
Fabric Prod. Div.
United Mer. & Mfrs., Inc.
New York

► This 20-page article proved so popular that our initial supply has been exhausted for some time. Upon demand from readers it has been reprinted again. We can now supply a limited number to those who desire it.

Dependable Service

You can count on outstanding service from every Textile Spring-Beard Needle. A special steel formula, superior tempering and scientific controls — automatic and electronic — make Textile Needles longer-lasting with exactly the right amount of strength needed to withstand every strain in knitting operations.

Dependable service is one of the many advantages you get in Textile Spring-Beard Needles. You get better performance, more even stitches, bigger profits.

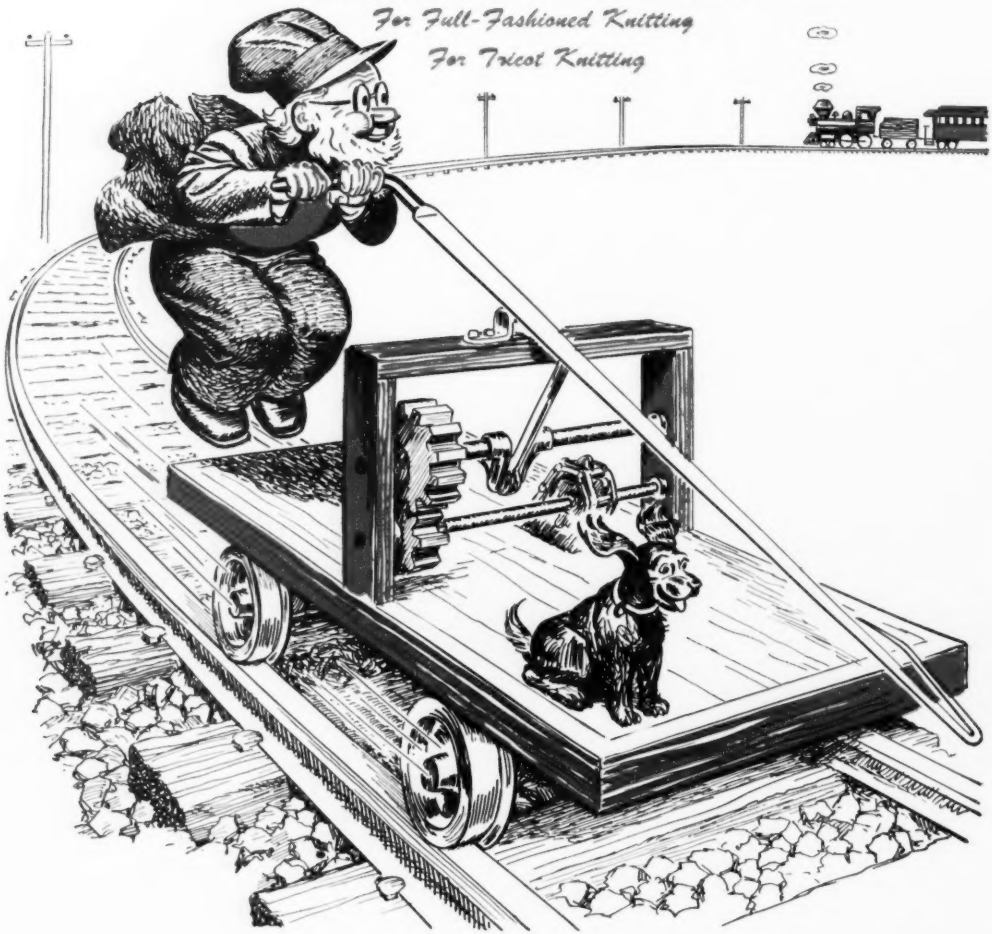
TEXTILE MACHINE WORKS, READING, PENNA.

Textile

SPRING-BEARD NEEDLES

For Full-Fashioned Knitting

For Tricot Knitting



EXCLUSIVE

A practical mill tool---

The Electrostatic Voltmeter

Staff Prepared

UNITED States Rubber Company's Textile Division has found the electrostatic voltmeter a practical aid in processing fibers into textiles and in determining the practicality of various fibers and fiber treatments for specific applications.

The electrostatic voltmeter is an instrument developed by the Institute of Textile Technology, in Charlottesville, Virginia; a new and improved model is now being produced commercially by Specialties, Inc., Skunks Misery Rd., Syosset, L. I., N. Y. When properly adjusted and placed near an object, the instrument will indicate the charge of static electricity present. It is simple to operate and is powered by a small dry cell battery which requires replacement about once every six months.

The only other maintenance required is a return to the factory every three years for calibration. The instrument indicates the in-

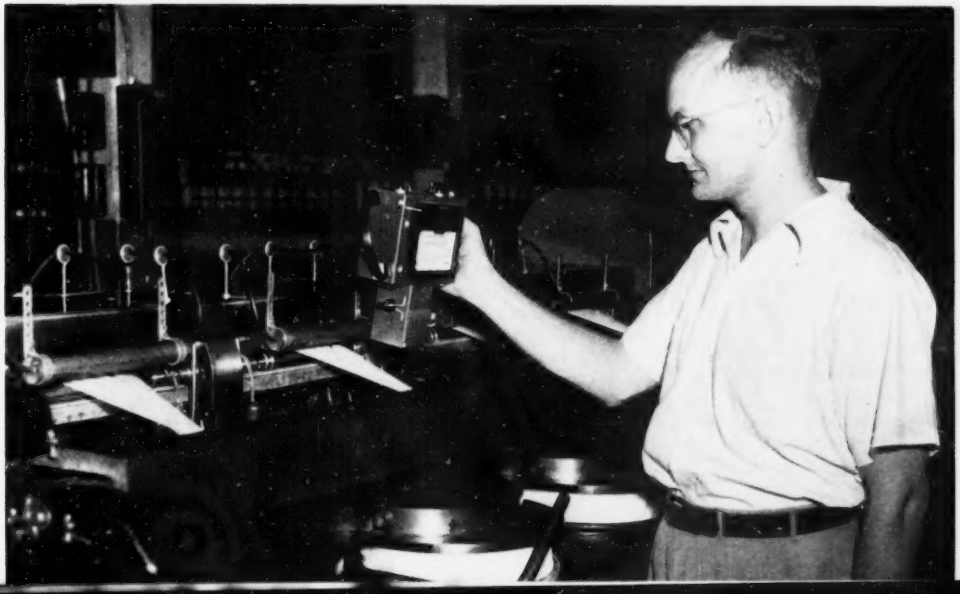
Application of the Instrument

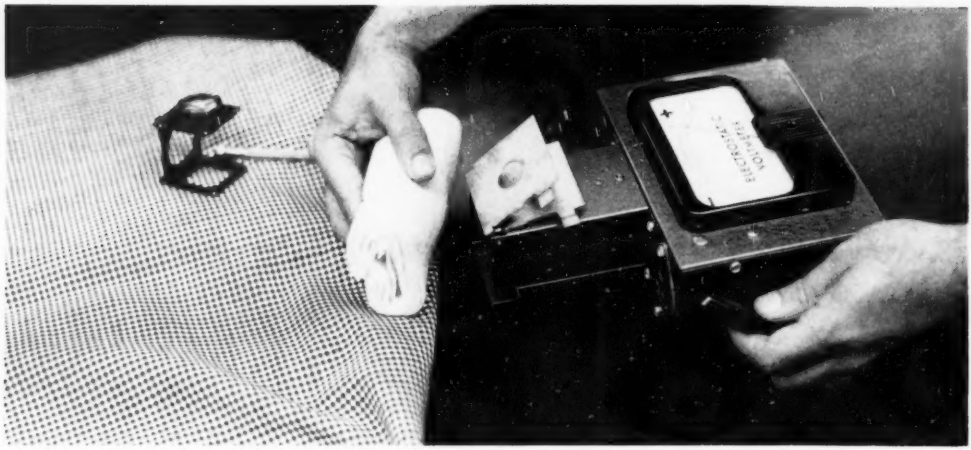
THE electrostatic voltmeter has been used to establish, within reasonable limits, the maximum static charge that can be accepted and still process satisfactorily. Also it has been used to ascertain the effect of incremental increases in percentage of relative humidity with regard to decreasing static.

Results have indicated that, beyond a certain point, increased humidity did not lead to better processing conditions and contributed only to greater discomfort to the operatives. In one instance humidity is now controlled as a function of optimum moisture for the material being processed, plus an absolute minimum of additional humidity when required to combat static.

The operatives indicated their appreciation of the efforts to give them the best possible working conditions; tangible increases have been reflected in productivity.

STATIC BUILDUP is being checked by Neal Truslow, supervisor of product control. Note the static control devices on the drawing frame and the electrostatic voltmeter used in the checking procedure.





ELECTROSTATIC VOLTMETER in use to test the finish on a fabric in the development department of the textile division of U. S. Rubber Company. The pad has been rubbed over the fabric and then held close to the instrument which indicates the amount of charge.

tensity of the charge and its duration as measured by half-life. The half-life is used as the measure rather than the length of time the charge lasts, because theoretically, the charge is never completely dissipated.

Static Troubles. As every mill man knows, static electricity can cause trouble. Charged fibers will lap around rolls, and ends will break when static intensity is great. In fact, static electricity is generated any time any dissimilar materials are rubbed together. In the mill, relatively high charges can be built up in drawing, spooling, warping, and similar processes, and the electrostatic voltmeter can be used to show the intensity and half-life of the charge.

After a little experience with the electrostatic voltmeter, men in the laboratory of U. S. Rubber Co., in Winnsboro, S. C., found they could make use of the instrument to tell them whether there was enough static electricity present at the trouble spot to be the cause. There is always some static present, but it was found that it had to reach a certain intensity before it could be classified as the cause of production troubles.

Determining the Cause. Sometimes static has been blamed for sins of which it was not guilty. Several times in Winnsboro, the electrostatic voltmeter has proved that the cause would have to be sought elsewhere.

On the other hand, there was a time when an unusually high number of ends were breaking on a particular pattern in warping. It did not seem possible to the investigators that static could be the cause, but the voltmeter showed an extremely high charge present. The charge was so high that the fibers in the yarn repelled each other so that they separated enough to weaken the yarn and cause a break.

It was found that the trouble lay in the use of large quantities of bleached yarn in the pattern. These bleached yarns had not been treated with the finishing oils customarily used with package dyed yarn, and they were, therefore, much more susceptible to static accumulation. As soon as oils were added to the bleached yarn, the trouble disappeared.

Bleached fibers and synthetics are particularly free of surface coatings and impurities which tend to conduct away static charges. It does not take long for these fibers to build up charges which will interfere with their free running in the mill. To run these fibers properly, it is necessary to use static eliminators at build-up points, add some type of surface active agent, or increase the humidity to the point where static will not accumulate on the fibers. The electrostatic voltmeter can be used to determine when one of these steps is necessary and then check to see that the action is effective.

It is, for example, a simple matter to determine the proper humidity to reduce static in the fibers. By using the instrument the humidity in the room can be adjusted to obtain satisfactory running conditions as far as static is concerned without having unnecessarily high humidities which might lead to employee discomfort.

Fibers and Fabrics. With the electrostatic voltmeter, it is easy to determine and predict the running characteristics of blends in so far as they are influenced by static. Fibers which, when rubbed together, give an indication of high intensity and long half-life will be hard to run without static eliminators, surface active agents, or high humidity.

Then, there is the very real problem of application of the finished product. Women's wear offers an excellent example. An employee of the New York office of U. S. Rubber Company was married not long ago, and all her bridesmaids were dressed in

Mills Pay $46,846 in Wages Under Amended Wage-Hour Law

Recently released statistics on the textile manufacturing industry's first full year of operations under the amended Federal Wage and Hour Law show that there is room for improvement.

According to the 1951 annual report of the U. S. Labor Department's Wage and Hour and Public Contracts Divisions, 52 per cent of the establishments investigated in this industry during the past fiscal year were found to have violated the Act's minimum wage, overtime pay or child-labor provisions.

"The 1951 record makes it clear that greater efforts on the part of some textile manufacturers would pay off in reduced liabilities for back wages owed employees," according to William R. McComb, the Divisions' administrator. His report shows that a total of $46,846 in back wages was paid to 756 employees, as a result of the Divisions' activities. This sum does not include amounts awarded by courts to employees who exercised their statutory right to sue for back pay and liquidated damages.

Although most employers know that the amendments raised the minimum wage to 75 cents an hour from 40 cents, the Divisions found that 11 per cent of those establishments investigated had failed to observe this requirement when paying some of their employees.

"Even more extensive were overtime pay violations, found in 43 per cent of the investigated establishments," Mr. McComb said. "Employers should remember that the amended Act continues to require payment of at least time and one-half the employer's regular rate of pay for all hours worked in excess of 40 in the work-week, except where the Act specifically provides otherwise. What the amendments did was to define the regular rate to include all remuneration for employment except certain specified payments."

Failure to comply with the Act's child-labor provisions was disclosed in 4 per cent of the investigated establishments. The child-labor requirements set a minimum age of 16 for most jobs with 18 as the minimum for occupations designated hazardous by the Secretary of Labor. Employment of boys and girls of 14 and 15 years of age is permitted in a few types of jobs—such as office and sales work—under strict restrictions on hours and working conditions.

Experience of the Divisions demonstrates that the great majority of employers intend to comply with the Act; in most cases, failures are due to misunderstandings about the statutory provisions.

Any employer who has questions about the Federal Wage and Hour Law is invited to inquire of the nearest regional office of the Divisions. These offices are located in Boston, New York, Philadelphia, Birmingham, Cleveland, Chicago, Kansas City, Dallas, San Francisco, and Nashville.

Clemson Host to Phi Psi Convention

The 49th annual convention of Phi Psi, national textile fraternity, will be held May 1, 2, and 3 at Clemson, S. C., according to an announcement made by M. Earl Heard of West Point Mfg. Co., grand council president of the organization.

Started at Philadelphia Textile Institute in 1903, Phi Psi now has over 3,000 active and alumni members. There are eight other student chapters at new Bedford Textile Institute, Lowell Textile Institute, Bradford Durfee Technical Institute, North Carolina State College, Georgia Tech, Clemson, Texas Tech, and Auburn. Twelve alumni chapters are located in principal textile centers.

The facilities of the Clemson School of Textiles and the Clemson House will be used to accommodate the gathering. Local arrangements will be handled by the Iota chapter of Phi Psi at the college and John T. Wigington, executive secretary of the organization and director of the Division of Technical Service of the American Cotton Manufacturers' Institute located at Clemson.

heavy nylon with full skirts. In practicing for the wedding, it was found that in walking up the aisle, on a heavy, new, wool carpet, the dresses did not billow and blouse at all as they were supposed to. In fact, the fabric kept clinging to and creeping up the bridesmaids' legs. A hurry call to the office brought a chemist with a spray gun of Tween-20, a surface active agent, which, when sprayed on the dresses, conducted off the static so that the wedding could proceed as planned.

In weaving new fabrics from new fibers and blends, U. S. Rubber Company wants to know how effective various surface active agents are and how long they will hold up with washing and cleaning. It is, they have found, difficult for a lady to wear properly a 100% nylon slip with a 100% Vicara dress unless such agents are used. The electrostatic voltmeter is used to determine the static characteristics of the fabrics and the effectiveness of the agents used to cut static.

Neal Truslow, supervisor of product development, Textile Division, says that the electrostatic voltmeter has contributed greatly to the quality of their product by the reduction of slubs and ends down in the yarn and by making possible studies of static generated in fabrics.

EXCLUSIVE

Low fiber breakage in

Clip Picking at Charlton Woolen

Gradual shredding of tailor clips, rags, etc., permits high production, preservation of fiber.

Staff Prepared

THE TWO MAIN GOALS of clip picking, high production and fiber length preservation, are separated by a wide chasm. This chasm can be bridged with the proper machinery, properly used. Such a "bridge" can be found at Charlton Woolen Company, Charlton City, Mass., manufacturers of cloakings and snowsuitings.

Gentle, persistent, and gradual shredding of clips in a succession of high speed opening operations is accomplished by Charlton's machinery. In this way, as much as possible of the original fiber length in the thread wastes and tailor clips is salvaged—without sacrificing production. In addition, a better quality yarn with respect to evenness and strength results.

Charlton appreciates the importance of keeping fiber breakage down. Long fibers are the muscle —the tensile strength—of yarns going into their fabrics. Also, these extra length fibers are the vehicle required to carry through carding and spinning all the short staple extracted. Besides contributing to a higher, more profitable yield, it is the shorter fibers which make up the fat of the yarn, giving it density and body.

Here's how it is done. Charlton protracts the opening process through a clip picker, lumper, and two stages of shredding in Fearnaught pickers. Tailor clips, rags, or hard threads making up the blend are first softened and frayed in the clip pickers. Opening of bits is further advanced at the lumper. By the time fibers emerge from the last Fearnaught picker they are completely separated and blossomed.

Thus, the tearing and grinding of staple into useless or inferior lengths, which would be produced when the stock is opened by a single, severe mechanical action, is largely averted, according to the management.

Blending. A Benoit blending system incorporated with the Fearnaught pickers thoroughly "homogenizes" various length or color fibers. The stock, so delivered, is ideally prepared for the cards which follow.

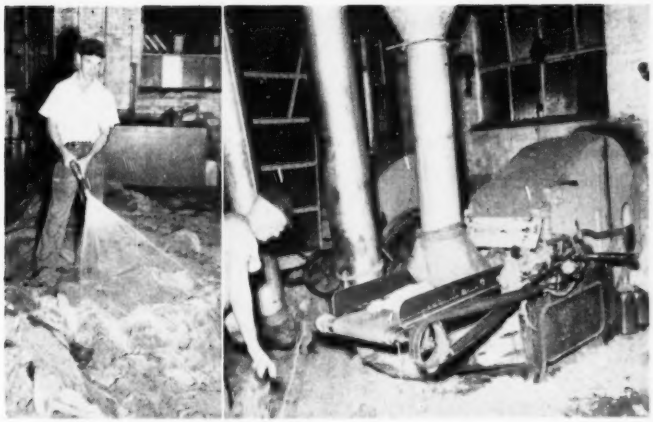
Blending actually begins at the clip pickers. Upon breaking the bale, stock is spread and sandwiched on the floor. As each layer is added to the sandwich, it is lubricated with a 6 to 1 emulsion of oil and water applied approximately 21 per cent by weight. A high pressure spray gun used for this purpose assures complete and uniform penetration of the emulsion through the pile, properly conditioning fibers for the rough ordeal ahead.

A portion of the sandwich is cut through and fed to one of eight pickers in the opening line at the rate of 200 pounds per hour. Pickers are 30" in diameter and 24" wide. A bit return system blows unopened stock from pickers and lumper back to the feed tables of the pickers for reworking with fresh clips.

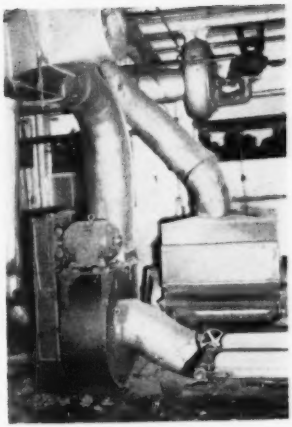
In order to maintain maximum production, the speed of the cylinder is kept at a constant 800 rpm. However, the setting between feed rolls and cylinder, as well as the rpm of the feed rolls, is varied depending on the nature of the stock. The feed rolls are slowed down to 4 or 5 rpm with a close cylinder setting for hard cloths such as worsteds or felts. Knit goods, threads, and similarly soft goods are run through with an open-set feed roll revolving at 14 or 15 rpm.

Cylinders are reversed every two weeks for even wear, and relagged every three months. Two spares are kept on hand. The lumper cylinder can go 5 or 6 years without repairs, but one spare is set aside.

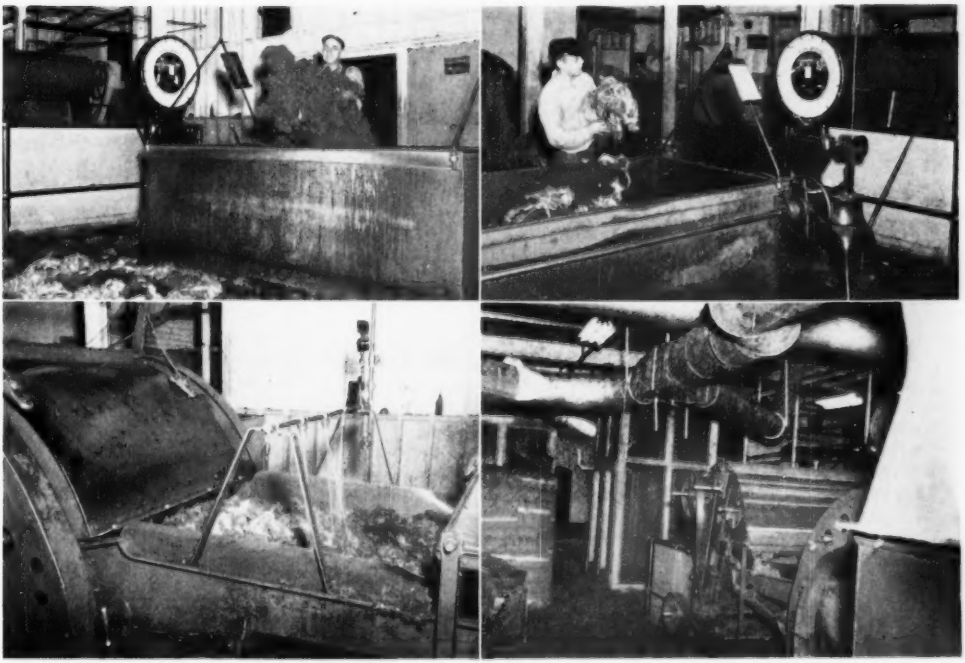
From the lumper, stock is blown through conduits to various bins in the Fearnaught picker shed. Here, the grey mixes, the blue mixes, the red mixes, and so on are carefully blended to specification in a 100-lb capacity steel basket equipped with trap-doors on the bottom. The basket serves as a weight pan for a Toledo scale. Increments of the blend, by percentage, are shown on the face of the scale by means of movable indices. The basket is loaded by adding indicated proportions in the



EMULSION IS PRESSURE-SPRAYED over clips in preparation for picking. Uniform penetration is assured, while soaking-in period is eliminated. Stock is partially opened at the picker, in the first of an extended series of opening actions.



OPENING AND BLENDING are advanced at the lumper. Bits are air-conveyed to clip pickers for reprocessing.



BENOIT SYSTEM OF BLENDING (top photos) produces uniformity in yarn strength and weight. Stock is added to basket according to blend formula. When contents are discharged, a conveyor belt delivers them to the Bramwell feed of a Fearnaught picker. Stock is sprayed (lower left photo) before being shredded in the Fearnaught. Opening and blending are considerably advanced in this unit without perceptible injury to staple or sacrifice of output. A second Fearnaught (lower right photo) operation results in stock perfectly conditioned for carding and spinning.

Notice for Users of Induction and Dielectric Heating Equipment

The National Electrical Manufacturers Association has invited the attention of all users of induction and dielectric heating equipment, particularly those whose equipment was manufactured prior to June 15, 1947, to the provisions of the FCC Rules and Regulations, Part 18, relating to radiation and communication interference from industrial induction and dielectric heating equipment.

In essence the rules require certification, on or before June 30, 1952, of compliance with certain minimum radiation requirements for all equipment installed or manufactured prior to July 1, 1947. A period of five years was allowed by the Commission for users of uncertified equipment to properly check and obtain certification of their equipment. The deadline date of June 30, 1952, is rapidly approaching, the Association warned, and all such users of uncertified equipments should take due notice and take steps to comply with the Commission's rules.

It is suggested that users of older type equipments contact the manufacturer of the equipment or a consulting engineer for guidance in complying with the rules. A complete copy of the FCC Part 18, Rules and Regulations Relating to Industrial, Scientific and Medical Service, may be obtained from the United States Government Printing Office, Washington.

Textile Institute Honors 5 Americans, 3 Canadians

Textile experts from all parts of the world are among those who have recently been elected to Fellowship and Associateship of the Textile Institute. They include five Americans, three Canadians, three Indians, and others are from Australia, Brazil, New Zealand, South Africa, Turkey, and Hong Kong.

New Fellows in America are: George S. Buck, Jr., technical director, National Cotton Council of America; Dr. Walter M. Scott, assistant chief, Bureau of Agricultural and Industrial Chemistry, United States Department of Agriculture; Dr. Emery I. Valko, Mountain Lakes, N. J., research consultant to manufacturers of textiles and textile chemicals.

New associates from the U. S. A. and Canada are: Ksawery Kowalski, textile chemist, Triangle Finishing Corporation, Johnstown, N. Y.; R. E. Seaman, Rayon Department, E. I. duPont de Nemours & Co., Inc., Wilmington, Del.; G. M. Bornet, technical assistant to production superintendent, Canadian Celanese Limited, Sorel, Quebec; Arthur Ehrlich, assistant manager, Globe Textile Mills, Ltd., Meaford, Ontario, Canada; Samuel Mitminger, technical assistant, weaving department, Canadian Celanese Limited, Drummondville, Quebec.

Of the new Associates, four were elected following their success in the Institute's 1951 examination in general textile technology, held at 26 centers in Britain and countries overseas.

There were 224 entrants for the examination, a higher number than in any previous year, and 87 were successful.

The next examinations are to be held on Saturday, May 17, 1952.

The Institute makes arrangements for the examination to be held at centers throughout the world where there are candidates.

blend formula consecutively so as to form a sandwich.

Contents of the basket are then discharged into a 500-lb capacity pit feed which services a Bramwell feed on the Fearnaught. An 18-ft long horizontal apron at the bottom of the pit conveys stock to a spiked lift apron. Here, blending is progressed further. A representative cross-section of the pile adheres to the lift apron as it cuts the sandwich. Tramp iron is extracted by an Eriez magnet mounted above the apron.

Shredding. Before being processed in the Fearnaught, the stock is once again lubricated; this time with a 6 to 1 emulsion applied 10 per cent by weight and delivered under pressure by three atomizer heads located in front of the feed rolls on the picker.

The Fearnaught, a Davis & Furber machine, opens the wool by means of a 48" diameter cock-spur-toothed cylinder rotating in conjunction with a similarly clothed set of workers. The combined action of cylinder and workers is to shred bunches of wool and intermix the fibers. This process is relatively gentle due to the slower speeds of its moving parts. Up to 2000 pounds an hour can be run through this unit without any appreciable fiber injury.

Stock is then blown directly to a wire cage-covered pit feed servicing the second Fearnaught. Fibers are again blended and combed at a rate synchronized with the first picker. Wools blown to bins in the card room are in good condition for processing.

TOOL may be used in several different ways to clean sinker rings effectively, as demonstrated in these photos.

Tool for Cleaning Sinker Rings

on circular knitting machines

By ERNEST BRIDGES

EXCLUSIVE

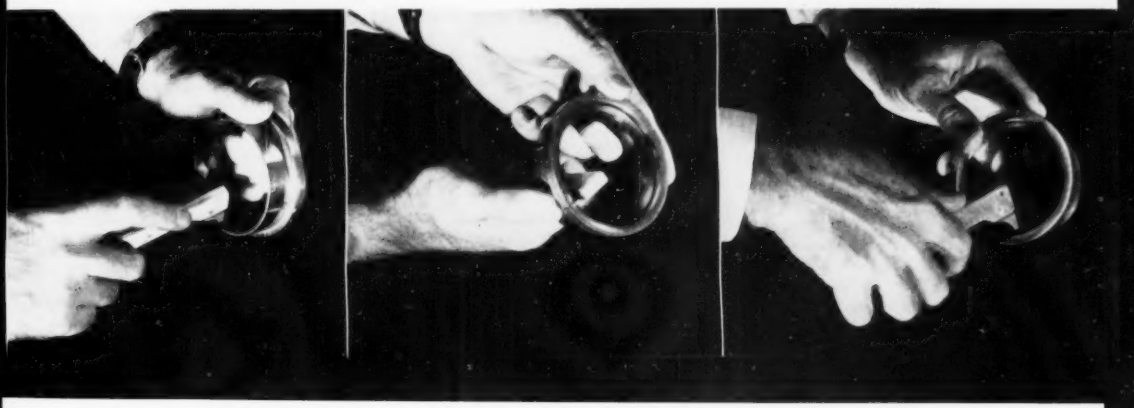
OCCASIONALLY a knitting machine fixer's helper or apprentice may ask some unusual questions while trying to master the fundamental principles of knitting hosiery. Recently an apprentice asked, "I know it takes this whole machine to knit a sock, but just what does the actual knitting?"

The answer is simple: needles, sinkers, and the sinker ring—these three elements combined make the stitches. Various types and makes of hosiery machines have sinker rings and sinkers designed to suit each make, but the function of sinkers and sinker rings is alike on all makes.

On some machines the rings are firmly attached to the upper part of the cylinder by solder or screws. On Komets the sinker ring is attached to a sleeve within the cylinder which holds the sinker ring in place above the cylinder; however the ring does not rest on top of the cylinder. In this respect Komets differ from other makes of circular hosiery machines.

Sinker rings on any make of machine do not cause very much trouble. The walls between the

(*Continued on page* 229)



A new synthetic--

X-51 Acrylic Fiber

X-51 IS A NEW synthetic fiber developed by American Cyanamid Company. It is being produced in two types, a wool-like staple and a silk-like yarn, according to the company.

Although both the staple and filament X-51 acrylic fiber have undergone experimental mill tests for some time, pilot plant production has not yet hit its full capacity, and no decision on future production plans has been made.

Tests have indicated that staple X-51 can be processed in mills having cotton or woolen equipment with virtually no modifications, and filament may be run similar to other synthetics on knitting or weaving machinery.

A wide range of fabrics is possible with the new fiber, which is mothproof, and easily washed or dry cleaned.

Mill processing data and other information concerning X-51 acrylic fiber follow:

Mill Handling of Filament X-51

Throwing, Weaving, and Knitting. The acrylic filament yarn has been thrown and woven or knit on conventional equipment by using the same procedures as for any other continuous filament synthetic. The weaver and knitter should bear in mind that X-51 yarns have a larger diameter for any denier than is found in rayon or acetate.

The three X-51 yarns produced (150/90, 100/60, and 75/45) have, for acrylics, a high number of filaments. The finer filaments are responsible for much of the pleasant feel of fabrics woven or knit from this fiber. Brushed fabrics have a resilient surface.

Filament yarn knits well, with good stretch formation, on both warp knitting and filling knitting machines if the needles are not overcrowded.

When warps are sized, the size should be compatible with the antistatic finish on the yarn; in slashing, caution should be taken not to overdry warps—cylinder temperatures should be kept low; the fiber dries quickly.

On Cotton-System Equipment (Also Applicable to Woolen and Worsted Equipment). These remarks apply primarily to processing X-51 on cotton-type equipment, but much can be applied to woolen and worsted equipment; information is for 3 denier staple, but procedure for 1.5 denier is only slightly different.

Relative humidity should be above 40 or 45%, with brief period to condition—especially if fiber is cold. Blending of bales is recommended; mild opening, such as blending feeder, is suggested. At this stage the great bulk of X-51 is noticed.

The bulkiness may necessitate minor changes on pickers to keep them from choking. The 12-oz lap is recommended instead of 14-oz. If laps split, run roving into lap as it is made.

Carding and Spinning. Cards with flats have handled 3 denier staple in lengths of 1½, 2 and 2½ inches; and 1.5 denier in lengths of 1½ and 2 inches. A fancy roll is needed for 1.5 denier and is recommended for 3 denier. Waste at carding should be about 2%, and very long runs can be made between strippings.

Use low twist multiple in roving (about 1.08).

When spinning, bulkiness should be considered; lower than normal twists should be used. Yarn strength increases rapidly on 3 denier at a twist multiple of 2 and above; maximum strength for 20s yarn is with a twist multiple of around 3; with 30s, it is around 3.3. The spinning limit with 1½-in. 3 denier staple is 30s and with 2 or 2½-in. staple slightly above. Initial work has shown that with 1.5 denier 60s are easy to produce, and 80s have been spun.

X-51 yarn can be twist set, but heat should not exceed 160 F dry bulb and 150 F wet bulb, nor should time exceed one hour.

Ply yarns can be woven without slashing.

Slashing and Weaving. Singles can be sized in a mix containing about a pound per gallon of a modified starch; other ingredients should be about ⅓ lb per gallon of synthetic size and small amounts of gum and softener. Keep temperatures low.

In weaving acrylic yarns, almost everyone has a tendency to over-construct, to try to put in too many ends and picks. Evidence is that X-51 appears to have a

Based on data supplied by American Cyanamid Company and addresses presented before the American Association of Textile Technologists by C. W. Bendigo, A. Cresswell, and A. L. Peiker of American Cyanamid Company.

Properties of X-51 Acrylic Fiber

Form: Crimped staple and continuous filament.

Color: Near-white. Staple, bluish-white; continuous filament, slight yellow tint; can be further bleached if desired.

Luster: Semi-dull; staple less lustrous than filament; fairly smooth surface.

Specific Gravity: 1.17; apparent density of staple in air is appreciably lower than the true specific gravity indicates; greater bulkiness than would be expected from the true specific gravity.

Melting Point: Incipient melting point or sticking temperature about 560 F; below this temperature it shrinks and shrivels.

Filament Average Dry Tenacity: 3.6 grams per denier, with elongation about 22%; fairly firm hand and good resistance to deformation under stresses associated with fiber handling.

Filament Average Wet Tenacity: 3.2 grams per denier, with elongation about 22%.

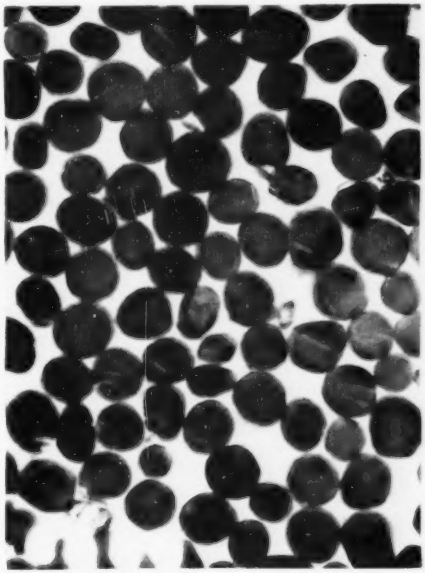
Filament Knot and Loop Tenacities: 2.0 and 2.8 grams per denier; loop elongation (for determining knitting properties) about 18%.

Staple Dry Tenacity: 2.5 grams per denier, with elongation of about 27%; good resistance to deformation under stresses induced by textile handling.

Outdoor Exposure Effects: Resistance to outdoor exposure (radiation, moisture, changes in temperature, etc.), good. One year direct exposure in Florida of filament showed a retention of 60% of initial tenacity and elongation. Loop and knot properties affected less.

Electrical Properties: Dependent on moisture conditions.

Dimensional Stability: As determined by relaxation shrinkage, good; stabilized crimp staple withstands boiling water; no fiber shrinkage. Filament shrinks less than 2% in boiling water; shrinks at high temperatures, with loss of tenacity; exposure of continuous filament yarn at 275 F for 6 hours gave no change in physical properties when tested at room temperatures.



PHOTOMICROGRAPH cross section view of X-51 fiber developed by American Cyanamid Co.

Flammability: Melts and may ignite when open flame is applied; in general, sparks and glowing embers will not ignite fabrics produced from staple or cause pinholes.

Insect Resistance: Excellent; soil burial test showed no change due to soil micro-organisms.

Chemical Resistance: Not dissolved or softened by usual organic solvents (hydrocarbons, alcohols, esters, ketones, ethers, or chlorinated hydrocarbons); resistance to acids very good (with tendency to bleach); resistance to alkalis fair to good (with tendency to yellow under severe conditions).

tendency to full. An over-constructed fabric made from overtwisted yarn works against the natural advantages offered by this fiber and other acrylic fibers.

Experience has been limited on blends, but best results probably will come from blends of rayon, wool, cotton, and azlon. For some uses, advantages may be seen in a three-fiber blend that would include nylon. At present, blends with acetate or with other hydrophobic fibers are not recommended.

End Uses. In knit products there is the whole range of bulky, warmth fabrics which can have warmth with a minimum of weight and a pleasant feel. With 1.5 denier, exceedingly strong, light fabrics can be made, or bulkier cashmere types. Properly constructed, the fabrics should have excellent dimensional stability, especially to washing. They can be expected to be resistant to attack by moths, to retain pleats or creases where desired, and to wear well.

In woven products, suggestions are for napped blankets, pile fabrics, and men's and women's outerwear, as well as industrial fabrics.

Scouring and Dyeing X-51 Staple

Scouring. One of the important properties of X-51 acrylic staple is the clean whiteness of the fiber itself. It is advisable that all preliminary processing of the fiber be carried out in a manner designed to avoid discoloration. Exposure

to alkali at high temperatures and for prolonged periods of time will cause yellowing. This yellowing can be prevented by reasonable care in processing, and if yellowing does occur, it can be corrected by subsequent treatments.

X-51 can be subjected to a normal wool scouring procedure to produce a good clean bottom. For example, it has been scoured for 15 minutes in a 30:1 bath containing 1% soda ash and 0.5% soap at 120 F to produce a clean white fabric. Temperatures in excess of 140 F and scouring times in excess of 30 minutes at 120 F should be avoided. If, however, due to error, excessive times or temperatures occur, the original whiteness can be restored by an acid rinse. It has been found that repeated home launderings do not materially change the color of the fiber.

Another Method. The fabrics or yarns are boiled for 15 minutes in a 30:1 bath made up of 0.25% Deceresol OT wetting agent containing 0.1% of glacial acetic acid. Other wetting agents and detergents that have been successfully used in this scouring process are Duponol WA, Nacconol, and Deceresol 22. A pH range of from 3.5 - 5.5 is recommended, although pH's up to 7 can be tolerated.

X-51 acrylic staple can be dyed with the following classes of dyes: acetate, acid and direct, basic, vat, and soluble vat. The information on dyeing is based almost entirely on laboratory studies.

Acetate Dyes. Staple can be dyed with practically all acetate dyes. The dyeing procedure is quite simple. The acetate dyes are dispersed in water alone. The use of dispersing agents, soaps, etc., is not recommended. The dyeings should be made at temperatures as close to the boil as is practical. Temperatures below 200 F should be avoided. At such temperatures, dyeing times of from one to one and one-half hours are required.

In general, the dyeing time may be reduced and the fastness properties, at equal depths of shade, improved by increasing the dyeing temperatures. Excellent dyeings have been made in 20 minutes on packages and raw stock in a one-package laboratory machine, under pressure, at temperatures between 230 and 250 F. The depth of shade per unit of dye and fastness properties were improved materially. While this dyeing technique shows real promise, there is one note of caution. The packages must be very soft and evenly wound.

As a class, these dyes show good build-up properties and heavy shades can be obtained. At equal depths of shade, the light fastness is about equivalent to that on nylon staple, the fastness to washing is comparable, and the crocking is negligible.

Acid and Direct Dyes. When dealing with most hydrophobic fibers, the classical division between acid and direct dyes is not clearly drawn. Using the cuprous ion method, most acid and milling dyes and a surprising number of direct dyes can be applied to X-51 acrylic fiber.

A large variety of colors can be obtained in depths ranging from pastels to deep, heavy shades. With care in the quantity of copper sulfate used in the dyeing, bright shades can be produced.

In general, the fastness to light, washing, perspiration, and crocking are quite similar to that of the corresponding dyes on wool. To obtain maximum fastness, these dyes must be applied at a good rolling boil.

Since no dyeing assistants such as p-phenylphenol are required, vigorous scouring after dyeing is unnecessary. Rinsing to remove excess surface dye is sufficient.

In general, the preferred method for applying acid and direct dyes by the cuprous ion method is to first treat the fiber with 1-3% copper sulfate, followed by 3-5% hydroxyl ammonium sulfate at the boil for 10 minutes. Dyeing is carried out at the boil for 30 minutes, then 4% sulfuric acid is added, and boiling is continued for an additional 30 minutes to one hour. The fiber is then rinsed well and dried. For maximum fastness the higher quantities of copper sulfate may be required, but for added brilliance of shades, the lower percentages are preferred.

Basic Dyes. In general, the dyes exhibit the usual brilliance, good wash fastness, good fastness to crocking, and in most cases exhibit rather good light fastness. In the application of basic dyes no assistants or mordants are required. Care in dyeing must be exercised because of the rapid rate of dye exhaustion. This can be controlled by starting the dyeing at low temperatures. The goods are kept at room temperature for about twenty minutes, after which the temperature of the dye bath is raised gradually to about 160 F and the dyeing completed.

Vat Dyes. X-51 staple can be dyed a wide range of shades with vat dyes from an alkaline bath. The fastness to washing, perspiration, and crocking is excellent. If properly applied, the fastness to light is in the range expected, providing the depth of shade is taken into account. It should be pointed out at this time that there are some anomalies to be found among these dyes. The usual cotton and rayon shade cards and fastness charts should not be relied upon for accurate data as to performance on hydrophobic fibers.

When applying the vats in alkaline baths, the dyes may be applied by either the reduced vat dyeing procedure, or they may be pigmented onto the X-51 and then reduced in the presence of the goods.

In dyeing X-51 staple by either the reduced vat method or the pigmentation method the concentration of caustic soda and hydrosulfite should not exceed 1 oz per gallon and 1¼ oz per gallon, respectively. The dyeing should be started cold, and temperatures above 160 F should be avoided. Since prolonged exposure to caustic at high temperatures will cause some discoloration of X-51 staple, the oxidation of the vat dye should be carried out at room temperature with hydrogen peroxide and acetic acid. The finishing is carried out at the boil with acetic acid and Duponol WA.

Soluble Vat Dyes. Light to medium shades can be produced on X-51 acrylic staple by means of the

(*Continued on page* 231)

EXCLUSIVE

Conveyor Speeds Welt Printing

at Shannon Hosiery Mills

Staff Prepared

A CONVEYOR belt arrangement has been utilized at Shannon Hosiery Mills, Inc., to increase production on a Welt Perma-Printer. The stockings arrive at the conveyor from the pairing tables, and here they are laid out by a lot clerk. There is no specific number of stockings in each lot. The operator has full control over the conveyor so she can move any number of stockings to the working area in accordance with the need.

The welt printing machine has been equipped with a foot-operated control so that the operative's hands are free at all times for other operations.

OPERATIVE moves hosiery into position as she needs it by means of the conveyor belt which is under her control. Below, close-up showing welt-printing operation. Production, 750 dozen pairs per day; every welt is imprinted.

The lot clerk lays the work out on the conveyor in such a way that the operator doesn't have to handle the hosiery; she simply flips the welts into the printer. The machine is set up to obtain 100 dozens per hour, which is considerably more than many installations are producing. Production in this instance amounts to 750 dozen pairs per day, and every welt is imprinted.

(An equipment performance report on the Perma-Printer appeared in the December 1950 issue of TEXTILE INDUSTRIES.)

EXCLUSIVE

Mill-Made Jig for Dyeing Tests

By J. R. STEWART

THE DEVELOPMENT of many new fibers and fabrics has made it necessary to run a considerable number of mill trials before going into full-scale production. Experimental lengths of new fabrics require frequently new and unusual dyeing and finishing routines so that such fabrics cannot be run through the mill along with regular goods.

Although some trials can be carried out with the goods in rope form in a dye kettle of small capacity, all those goods which will eventually be processed by continuous methods of mass production in open width cannot be evaluated properly by this method.

In order to cut down the expense of using full-scale machinery with resulting differences in dye and finish bath concentrations, as well as greater chemical and dye cost, an experimental constant speed jig for short and delicate fabrics has been designed.

The experimental jig is capable of treating pieces of the most delicate nature, as well as heavier goods in lengths down to 20 yards, without the need of expensive accessories. It is equally well adapted for dyeing, padding, and finishing and can operate with as little as two gallons of liquor.

Fig. 1 shows a side view of the machine. It was built entirely by mill mechanics, with mill equipment, the only special item being a small reversing hydraulic gear [I. Vickers, (8) in Fig. 2].

Description. The frame (1) is welded from two-inch web angle iron and holds the small capacity V-tank (3) welded from stainless steel and provided with gate valve outlet (12) and stainless steel strip bearings for a stainless steel roller

EXPERIMENTAL JIG CONSTRUCTION DETAILS are given in these sketches (Fig. 1, left; Fig. 2, right). Legend: (1) welded frame; (2) rubber roll; (3) stainless steel V-tank; (4) stainless steel roller; (5) batching rails; (6) fabric; (7) steam supply; (8) variable speed gear; (9) motor; (10) steam trap; (11) steam valve; (12) outlet.

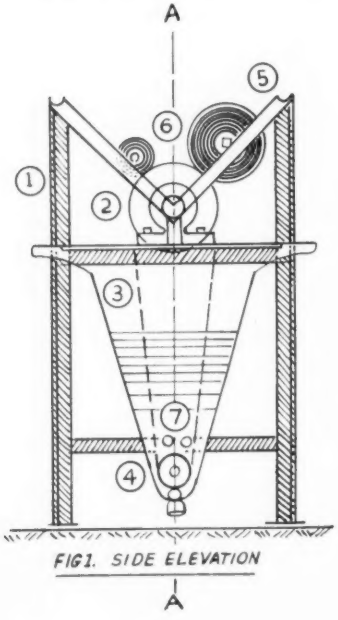


FIG 1. SIDE ELEVATION

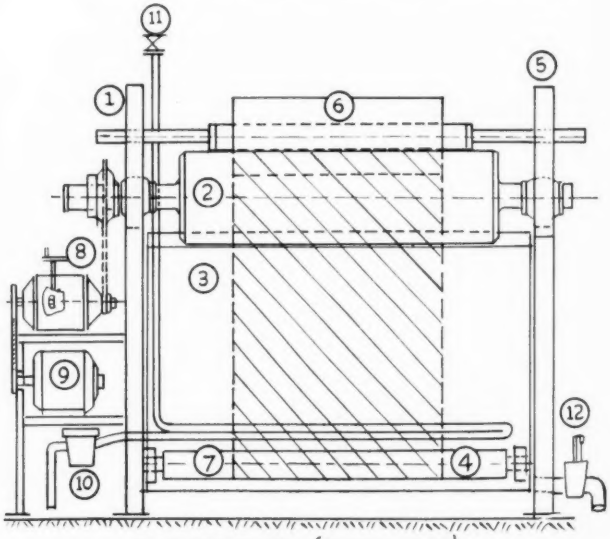


FIG 2. FRONT VIEW (SECTION A-A)

The Great Freight Rate Dispute

EDITOR TEXTILE INDUSTRIES:

News items in the papers recently announced that the long-drawn-out freight rate controversy was now apparently at an end. Editorials accompanied this news, calling attention to the billions of dollars that these freight rate inequities have cost the South, and felicitating this section of the country on the prosperity that must ensue after the adjustment of freight rates on certain manufactured goods.

It must have been at least ten or 15 years ago that some southern governor, looking for a good issue to whoop up, found that there was a difference in freight rates between certain northern points and equivalent distances in, or to, the South. There must have been a dearth of good issues at the time (or else the man who made this discovery was anxious to divert public attention from something), because the hue and cry was taken up by various southern governors and southern newspapers.

I don't remember ever running across any southern manufacturers who attached any importance to this so-called freight rate disparity, but I did encounter several northern manufacturers who poked unlimited fun at the southern governors and southern newspapers over this tilt at the windmills.

These alleged freight rate inequities probably had about as much to do with southern business and southern prosperity as the annual snowfall in Siberia, but somehow or other it got whipped up into a first-class issue with the press. At one of the Governors' Conventions in Denver some years ago an attempt was made by some of the southern delegation to arouse the western governors into joining this holy crusade for equalizing freight rates, but the western governors lacked interest and made the very practical observation that they didn't consider the matter of any importance. Editors in the Denver newspapers also wondered mildly why a bunch of governors could get all worked up over a matter of such small consequence, when there were big things in urgent need of consideration and attention.

I am glad to see that this matter is now about to be quietly laid to rest, because the outcry about these alleged inequities or iniquities held the southern states up to a good deal of ridicule in other parts of the country. The newspapers could have much better spent time and effort on pointing out the big over-riding reason why manufacturing plants have moved to the South, and should continue to move there—that is, to get away from the iron grip of the labor unions in so many sections of the North and Northeast.

P. A.
President

Improved Sheep Branding Fluid

To provide better fluidity of sheep branding fluid made by the formula developed by Dr. C. G. LeCompte of the U. S. Department of Agriculture (see article "The Value of Scourable Sheep Branding Fluids in Wool Manufacturing," TI for September, 1950; also, page 127, TI for October, 1950) carbon tetrachloride has been dropped and rosin, monoethanolamine, and water added, according to The Wool Bureau, Inc.

Field experiments now under way are expected to prove conclusively whether or not the fluid made by the improved formula retains both its durability and its scouring characteristics.

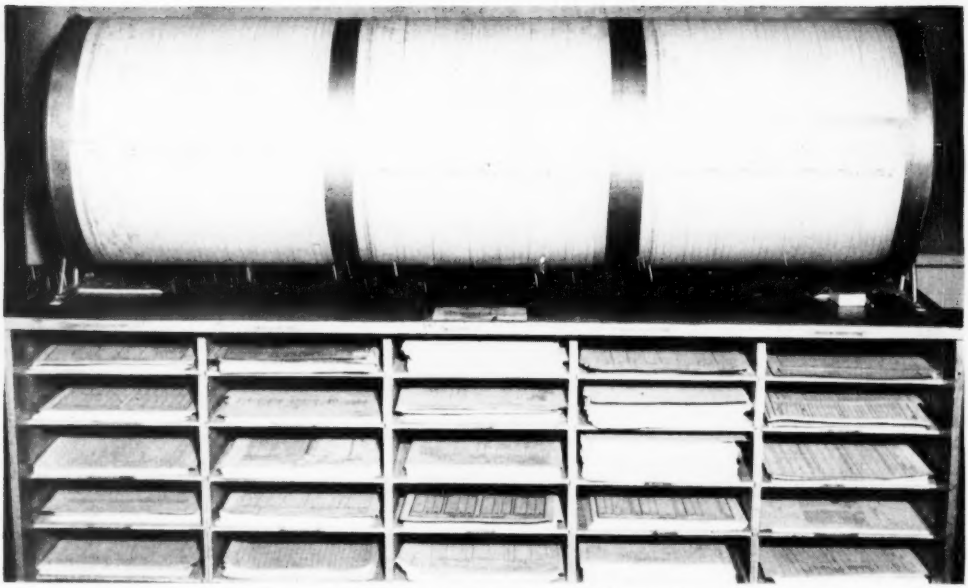
(4). The tank is heated by direct and/or indirect stainless steel pipe (7) with valve or automatic temperature control (11). Three-quarter-inch pipe suffices. A steam trap (10) of regular type is used.

The driving force for the fabric is a nine-inch rubber covered roll (2)—a squeeze roll from a print washer or pad. This is mounted on ball bearings centrally and is driven by V-belt or chain from the Vickers variable oil gear (8), and motor (9), supported on welded one-inch side brackets.

Operation. After marking, each end of the experimental piece is turned over a short distance equal to the circumference of a regular batch roll and sewn across to give a tubular end. This is slipped over a wood batch roll and the piece is beamed up, threaded into the jig, and the other end of the piece is slipped over another batch roll.

Both the beamed piece and the empty batch roll rest on inclined angle iron pieces (5) which make an angle of 90 degrees with one another. The full width of the fabric is in contact with the rubber covered roll (2). Upon starting the roll (2) clockwise by means of (8) and (9), the fabric is wound at constant speed and without any tension from the right batch through the tank (3) and onto batch roll (6). At the end of its run the piece is stopped automatically in that it is fixed to each batch roll.

The machine is designed to prevent jerks, tension, or irregular speed of the cloth often experienced in other jigs. It can be made to run constantly at any speed desired, and speed may be increased or reduced at start and stop of each run smoothly and rapidly. The simplicity and range of use of the experimental jig is remarkable as compared with other machines.



DRUM MOUNTED on laboratory test form magazine is easily accessible; provides maintenance data at glance.

A Unique System

THE VALUE of an accurate and easy-to-read method of recording maintenance data is emphasized by the complexity of machinery maintenance and the current high cost of the work involved.

A simple system was derived to keep a lasting record and also to indicate at a glance whether all routine maintenance tasks were being carried out *on schedule* in our mill.

Construction of Recording System. Here are the details: A hollow metal cylinder of some 42" length and 14" diameter was constructed of No. 28 gauge sheet. The ends were covered with metal flanges of the same material, and through the center of the cylinder was passed a ¼" mild steel rod which protruded 2" beyond the center of each flange. The protrusions rested in two U-shaped metal supports so that the "drum" could be easily rotated by hand.

Three long sheets of squared paper were then prepared for mounting on the drum. Each had vertical lines ruled ⅜" apart down the whole length of the sheet. At the top of the resulting columns was inserted the date of each Saturday for the next six months (the months being typed above the dates) so that we had a column for the work completed each week.

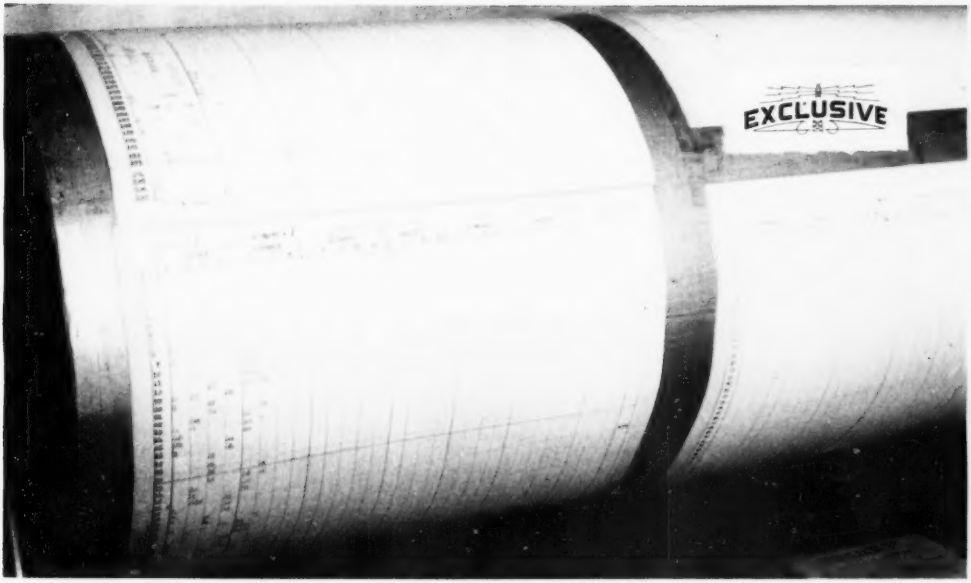
In the left-hand column, running downwards, were typed the successive numbers of all the machines in one process. Finally, our three sheets were headed with the names of the processes covered, had the legends of their color marks entered upon them and were fastened with Scotch tape directly on the drum. In six months' use, no trouble was found with wrinkling of the paper or the tape becoming detached.

The left-hand sheet on the drum covered carding; the center, warp spinning and roving; and the right-hand sheet, all remaining processes.

How the System Operates. The operation is simple and is briefly as follows:

(1) At the end of each shift the head scourer, traveler changer, etc., brings a report on the work

$100, plus space rates, went to Mr. Hart for this winning entry in one of TI's KINK CONTESTS. Readers are invited to submit kinks, short-cuts, time-savers, or quality improvement suggestions in the contest currently under way. See announcement on page 193 for details.



CLOSE-UP OF FORMS mounted on drum shows beginning and end of form with clearly legible information.

for Recording Maintenance Data

SIMPLE and accurate records quickly provide information which indicates whether maintenance work is performed on schedule. Up to thirty different tasks may be recorded, and the data serve as a useful and inexpensive calendar for planning maintenance months ahead.

By DOUGLAS G. HART
Dominion Textile Co., Ltd.
Magog, P. Q., Canada

completed to the control laboratory where the drum is maintained up-to-date on a daily basis.

(2) A small check mark is entered upon the appropriate drum sheet. This mark is colored (indicating the type of job completed) and beside it is the date. For example: √ 14.

Thus, to check when any given frame was last scoured, the drum is rotated until the frame number appears. The observer looks to the right of the frame number and on noting the last entry in the scouring color, he also sees the date when that job was done. At the head of the column he finds the week and month.

Sliding acetate sheets wrapped around the drum prevent smearing when the drums are handled. The acetate may be moved aside for making entries on the sheets.

(3) At the end of each week, we examine the column on the carding sheet, add up the number of cards ground, and write in the total at the bottom of the sheet. The procedure insures that card maintenance cannot lag behind schedule without being observed

Results. Advantages of the system are summarized here.

(a) A continuing and precise record is always available for inspection by the mill manager, superintendent, and other supervisory personnel.

(b) Being maintained by one man, an average of about ten minutes' work a day is all that is needed to keep the record up-to-date.

(c) The cost of manufacture and the time required to draw up the

Report on Knit Goods Shrink Test Methods

The Task Group of the American Society for Testing Materials has made considerable progress in developing a test for the shrinkage of knit rayon and acetate fabrics in laundering, the Underwear Institute reports.

The final method is not quite ready for proposal to the American Society for Testing Materials, the most important question to be resolved being whether tumble drying is applicable to rayon and acetate fabrics or whether both tumble and flat drying should be included in the method.

This same committee has just about completed procedures for testing circular knit cotton for shrinkage and laundering. One of the technicalities which the committee is investigating further is the possibility of reducing the time required to perform the test.

Munsingwear, Inc., Cluett Peabody, Inc., and the William Carter Company are presently conducting experiments to determine if a method requiring less time can not be developed and give essentially the same results as the long method. These experiments are in process but have not as yet been completed, according to the Institute.

sheets for a six-month period in this instance were amortized within the first three months by the lesser time required to record the data.

(d) A glance at the pattern of the check marks indicates immediately, for any one job, whether that work is being carried out on the correct schedule. By taking a frame number and counting the columns between check marks, one has the number of weeks elapsed. The use of different colors reduces the risk of confusion between different jobs.

(e) When a change occurs in the number of shifts and/or days worked, the pattern of check marks for any routine work will change. Since the same change should occur between all work on a similar schedule, a glance at the relationship between old and new patterns will promptly reveal whether the maintenance teams are keeping "on schedule" or not.

As a result of fifteen months' experience, it can be said that our method of recording maintenance offers substantial benefits in improved control. The system is much more accurate and informative than vague notes kept in each department's office, and does not in any way conflict with already-established responsibilities. The system provides for recording up to thirty different tasks without becoming hard to read, and it also serves as a useful calendar for making specific notes on mill maintenance problems weeks or months ahead.

Following is a list of some of the tasks being recorded in our mill:

CARDING
- Cards ground
- Cards scoured
- Flat chains changed
- Flats set
- Card clothing changed

DRAWING (Incl. Lap Winding)
- Frames scoured
- Rolls buffed
- Lining and leveling

ROVING
- Frames scoured
- Frames lined and leveled
- Rolls oiled
- Needle rolls oiled

SPINNING
- Frames scoured
- Frames lined and leveled
- Travelers changed
- Rolls oiled
- Spindles set
- Spindles pumped
- Rings changed

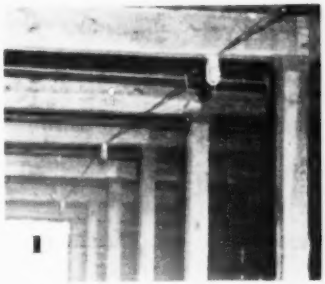
SAMPLE FORM shows pertinent data on scouring, grinding, card maintenance, and other details of value.

Electrical Hazards in Textile Mills

No. 4 of a series

EXCLUSIVE

WRONG EQUIPMENT POOR INSTALLATION



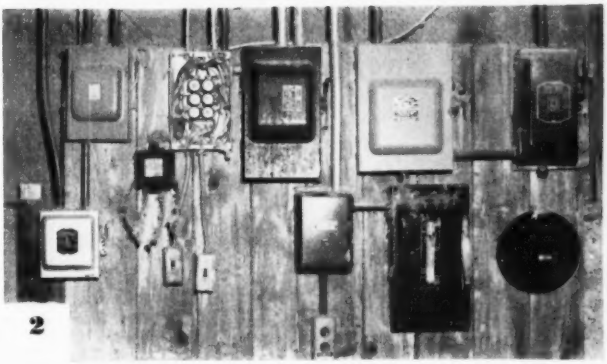
1

1. This mill went to considerable expense to purchase dust tight fixtures and rigid conduit for the warehouse, then routed conduit below timbers where it is frequently damaged by stackers.

2. None of this switch and fuse equipment is dust tight. Cover for fuse box is missing. All boxes are full of lint, yet this panel is less than three feet from machinery and stock.

3. This switch room looks more like a junk room. Note open type equipment and temporary wiring. Lint indicates this is unsafe location for such equipment.

4. Electrical equipment, including wiring and junction boxes, should not be installed in unsprinklered spaces or basements below combustible ground floors. Here a short circuit in a junction box caused a bad fire.



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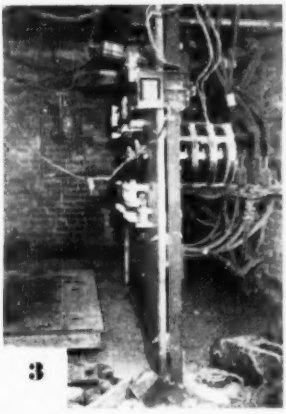

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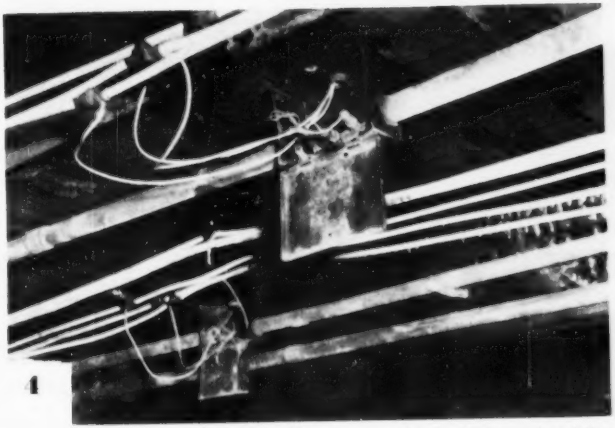


4

Photos courtesy, Factory Insurance Association

*Article 9**

EXCLUSIVE

By RAMON PARKS

Good Housekeeping

THE TERM "good housekeeping" is usually thought of as being in the realm of the housewife, and most women are usually proud to be called a good housekeeper by their neighbors and friends. We do not know how long this term has been applied to manufacturing plants, but at least at the present time the term is in general use in industry and is quite familiar to our readers. The supervisor may not be proud to be called a good housekeeper because of its feminine application, but he will most certainly beam with pride when some visitor, or maybe even the boss, tells him that his room looks good!

It has long been the custom in most plants to do extra cleaning when important visitors are expected, and on other special occasions. This is well and good, but this is not the kind of housekeeping that we wish to discuss. The program of good housekeeping that we are thinking about is a *continuous* program, yielding results more far-reaching than just good appearance, as important as this is.

Some of these results are: more pleasant surroundings in which to work, more production because of less waiting time due to misplaced tools and supplies needed to keep machines going, reduction in soiled and greasy materials, and fewer accidents because of safer working conditions.

Cleaning Methods. The problem of lint in the cotton mill is an ever present one; it is probably the most difficult housekeeping problem faced by the overseer. Frankly, we do not claim to have the final answer to this question. Vacuum cleaning would be the ideal method; in fact it is being used to a limited extent in some plants, but because it is impractical to use in certain places and because of the high cost of such a system, other methods will have to suffice for some time to come.

The installation of overhead blowers is becoming rather widespread. Though it is recognized that the blower does not dispose of the lint, but simply directs it toward the floor, its principal benefit lies in the prevention of the accumulation of lint on machines, ceiling, pipes, etc., thus making it unnecessary to remove large accumulations which would in all probability damage the stock in process. In areas where it is not feasible to install blowers, continuous blowing off or blowing down with compressed air seems to be the logical solution to the problem. If this is not practicable then the next best thing seems to be to blow down periodically when the machinery can be stopped and covered. At least the lint can be blown off, fanned off, or picked off before the machines are started.

An underframe blower is now available for spinning and twister frames which keeps the under parts of these frames as clean as the overhead blower does for the creel and upper parts of the frames.

We also have seen at least one installation of overhead blowers over Draper looms which was doing a good job of keeping the arches, harnesses, reeds, and drop wires clean.

*Subjects covered in previous articles of this series: "Hiring and Training," "Employee Relations," "Cooperation," "Planning Your Work; Delegating Responsibility," "Machinery Maintenance," "Cost Control," "Quality Control," "Waste Control."

Reprints of individual articles will not be available. However, if the demand for the entire series is sufficient, it will be placed in booklet form. Write the editors if you are interested.

In places where oil and grease may be present, lint will adhere and cannot be very well removed by compressed air. Wiping with some type of waste seems to be the best solution. Waste should not be used on moving gears, pulleys, or shafting (in fact on moving machinery of any kind). Most mills clean looms after the warp has run out and the empty beam has been removed. (Oiling and inspection of the under parts of the loom can best be made at this time, also.)

One distinct mark of poor housekeeping is to see pieces, bad work, or broken bobbins left on creels or in back sides until they are covered with lint and dust. Bad work, whether on fly frames, spinning frames, spoolers, twisters, etc., should be removed each shift and sent promptly to the department responsible. This not only improves the appearance of the room, but enables the bad work to be straightened up and put into production promptly, reducing the danger of mixed stock later on.

Orderliness. An excellent motto to remember in good housekeeping is, "A place for everything, and everything in its place!" It is strictly up to the supervisor to have proper storage places provided for any and every kind of supplies and equipment needed to operate his department. In a weave room, for example, this would apply to warps, filling, empty beams, trucks, cloth rollers, reeds, harness, loom fixers' supplies, lubrication supplies and equipment, etc.

Warps should be stored in such a way that the tickets identifying the warps can be read without someone having to climb upon the warps to check them. Supplies and equipment should not be permitted to clutter up alleys and passageways. Many mills are marking off storage spaces and aisles on the floor with colored paint and require that passageways be kept clear at all times. If beams have to be stored near aisles, it is best to have the beams or warps stored parallel with the passageway, for if they are left at right angles to the aisle the gudgeons may protrude into the aisle where someone may walk against them and injure a shin.

A beaming room or slasher room is most difficult to keep orderly and often taxes the ability of the overseer to practice those principles of good housekeeping which he knows. Presser rolls, lease rods, weights, etc., left on the floor are definitely accident hazards. As some of these items are very heavy, storage racks should be placed as near the machines where they are to be used as possible so the operatives will not have to carry them so far. Racks should not be so high that back injuries or other strains may result from their use. (A presser roll is not only an accident hazard when left on the floor, but it may roll over a piece of greasy waste and ruin several yards of the next warp that it comes in contact with.)

Boxes of yarn should not be piled so that there is danger of the bobbins of yarn falling on the floor, thus getting dirty and creating additional accident hazards. The boxes should be stored in rows and in such a way that the yarn can be properly checked without the checker having to climb on the boxes to see the tags.

Yarn and roving boxes which are badly in need of repair and paint reflect upon the housekeeping ability of the overseer. The repair shop is not usually going around the mill hunting these kinds of jobs to do, but if the boxes are sent to the shop they usually come back looking like new. If possible each department should have its own distinctive color and markings for its boxes, trucks, etc., and except in the case of actual unavoidable shortages as might occur during some emergency, substitutes should not be permitted.

Waste boxes are often an eyesore, and many a department has been improved one hundred per cent in appearance by repainting its waste boxes a bright, attractive color. Waste boxes throughout the entire mill might be painted one distinctive color, with each department designation stenciled on the sides and ends of the boxes.

All fire-fighting equipment should be painted a distinctive color, contrasting with the color scheme of the surrounding area. (Naturally, this equipment must be kept clean and in condition for instant use.)

Work Benches and Dressing Rooms. It is an easy matter for storage cabinets and workbenches to become so cluttered with odds and ends that when something is wanted it is difficult to find. A good plan is to have a definite schedule for inspecting such storage places. Once a month would be often enough. The section men or other personnel responsible for storage cabinets and workbenches would first be given an opportunity to straighten and clean these places. The secondhands might make a preliminary inspection, assisting the men in disposing of items no longer needed. The overseer could then make the final inspection, commending those who did a good job.

Dressing rooms and cloak rooms can become an eyesore and a menace to health when not kept strictly clean. Eating in these places should be forbidden because such practice encourages the breeding of rats, roaches, and other vermin. Dirty clothes and work shoes when allowed to remain in closed places create very offensive odors. Usually the mill furnishes janitor service for dressing rooms, cloak rooms, and toilets, but it is up to the overseer to be sure that none of this work is skimped. The employees should cooperate by occasionally removing all of their belongings from these places to permit a thorough cleaning—and disinfecting if necessary.

If first aid supplies are placed in the individual departments, they should be kept in the most aseptic manner possible. A special cabinet should be provided, usually kept locked to prevent the disappearance of various first aid items. This cabinet should be kept stocked with fresh, sterile supplies, ready for instant use.

It is not the purpose of this article to sell any particular floor cleaning preparation or method, but no

(*Continued on page 171*)

Underwear and Outerwear Manufacturers! Plan now to

Attend the 2nd Knitting and Allied

New York City--April 21-25

A CIRCULAR MACHINE that "virtually knits patterns of air" is but one of the new developments to be revealed to underwear, outerwear and allied industry executives and key operating personnel when they attend the second Knitting and Allied Crafts Exposition at Grand Central Palace in New York City during the week of April 21-25.

Also on display for the first time will be an all-purpose Raschel type knitting machine and a ribber for the manufacture of fancy-pattern rib knit gloves, according to advanced information furnished by two of the exhibitors at this biennial trade show which is sponsored jointly by the National Knitted Outerwear Association and the Underwear Institute, Inc.

As this was written, more than 100 suppliers of machinery, equipment, and materials utilized in the manufacture of underwear and outerwear had contracted for space in which to greet their customer friends and show their wares, the exposition management ported. In addition to knitting machines of all types (circular, flat, tricot, rib, jersey, etc.), featured in their exhibits will be the following:

Supplies, including knitting yarns of all types—cotton, wool, synthetic, blends of natural and synthetic fibers, novelty twists, etc.; knitting needles, machine parts, special attachments, etc.

Finishing machinery for all kinds of knit goods; soaps, softeners, synthetic detergents, and special finishes.

Auxiliary equipment, such as winders, materials handling devices, inspection and mending devices, etc.

Converter's equipment and supplies including knit goods spreaders, thread trimmers, pressing machines, sewing machines, sewing thread, buttonhole markers, etc.

At the January 18 meeting of the Joint Exposition Committee of the National Knitted Outerwear Association and the Underwear Institute, which has control of the Exposition, show director Arthur Tarshis reported that the entire first floor of the Palace had been sold out; furthermore, that on the basis of the number of applications in hand for consideration it appeared that the second floor would have to be taken over to accommodate industry suppliers wanting exhibition space.

With the large number of knitters reported to be coming from South America, Europe, and other parts of the world, attendance at this show is expected to exceed that of the first Knitting and Allied Crafts Exposition held in 1950 at the 71st Regiment Armory.

Hotel accommodations are available; however, those planning to attend are urged to make reservations immediately by addressing communications directly to the hotels of their choice.

The Exposition officially opens on Monday, April 21 at 2:00 pm and closes on Friday, April 25, at 4:00 pm. Show hours have been announced as follows: Monday, 2:00 pm to 10:00 pm; Tuesday, Wednesday, and Thursday, 10:30 am to 10:00 pm; Friday, 10:00 am to 4:00 pm.

Tickets for admission are available upon request to TEXTILE INDUSTRIES, 806 Peachtree St., N. E., Atlanta 5, Ga., or Arthur Tarshis,

Guide to Exhibitors' Booths at the

ALAMAC KNITTING MILLS 75
New York, N. Y.
Suppliers of: Knitted fabric; dyers.

ALLEN KNITTING MILLS, INC. 132A
New York, N. Y.
Suppliers of: Knitted fabrics.

ALEXANDER ASSOCIATES 87
Philadelphia, Pa.
Suppliers of: Yarns

AMERICAN SAFETY TABLE CO. 80
New York, N. Y.
Suppliers of: Power driving equipment for industrial sewing machines.

THE AMERICAN SCHWEITER CO. 134
Whitinsville, Mass.
Suppliers of: Precision cone winders.

AMERICAN THREAD CO. 29
New York, N. Y.
Suppliers of: Threads and yarns.

AMERICAN VISCOSE CORP. 4
New York, N. Y.
Suppliers of: Yarns.

AMERICAN YARN & PROCESSING CO. 80
Mount Holly, N. C.
Suppliers of: Yarns.

AMES WORSTED CO. 130
Lowell, Mass.

AVONDALE MILLS 136
Sylacauga, Ala.
Suppliers of: Yarns.

BARBET MILLS 42
New York, N. Y.

Crafts Exposition

president, Expositions, Inc., 12 West 72nd St., New York 23, N. Y. (Note: TI's readers may use the convenient business reply card on page 258 for requesting their tickets to the show).

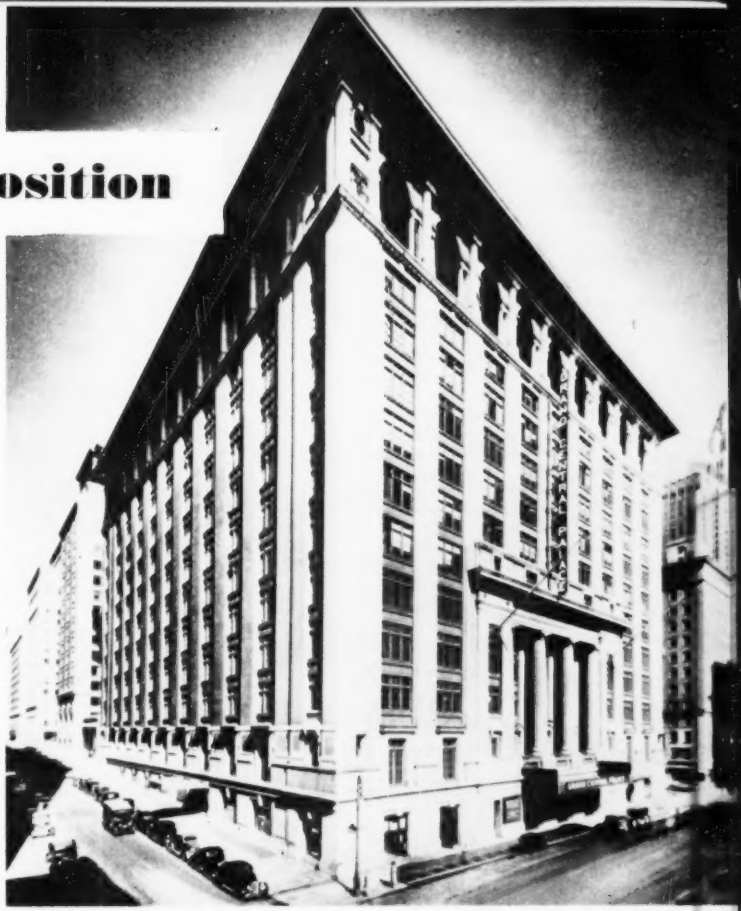
Outerwear Meeting. On Tuesday and Wednesday, April 22 and 23, the 34th annual convention of the National Knitted Outerwear Association will be held at the Waldorf-Astoria. Climax of the two-day meeting will be the annual banquet to be held on Wednesday evening in the Grand Ballroom.

Underwear Meeting. The annual meeting of the Underwear Institute will be held on Thursday, April 24, at the Hotel Commodore, to be preceded on April 23 at the same place by an executive committee meeting.

Directory of Exhibitors. Listed below and on the next four pages are the names of the exhibitors, their home office addresses, and the equipment and/or materials for which they are known in the industry.

To assist those planning to attend the show in locating their supplier friends, a simplified floor plan of the Exposition Hall appears on page 127. Key to this diagram is contained in the accompanying list of exhibitors.

To locate a specific supplier, note the number opposite his name in the list; find that number on the diagram and there will be the space to be occupied by that firm.



GRAND CENTRAL PALACE, on Lexington Avenue between 46th and 47th Streets, will house the second Knitting and Allied Crafts Exposition.

Knitting & Allied Crafts Exposition

BARRE WOOL COMBING CO., LTD. 130
Boston, Mass.
Suppliers of: Wool tops.

BAUSCH & LOMB OPTICAL CO. 88
Rochester, N. Y.
Suppliers of: Visual performance testing and other optical instruments.

BELDING HEMINGWAY CORTICELLI 114
New York, N. Y.
Suppliers of: Sewing threads.

S. BLICKMAN, INC. 62A
Weehawken, N. J.
Suppliers of: Dyeing and finishing equipment.

BRANT YARNS, INC. 116B
New York, N. Y.
Suppliers of: Yarns.

H. BRINTON CO. 51
Philadelphia, Pa.
Suppliers of: Circular knitting machines for producing outerwear, underwear, bathing suits, dress fabrics, gloves, and rib tops for socks.

CARON SPINNING CO. 86
Rochelle, Ill.
Suppliers of: Yarns.

CLUETT, PEABODY CO. 85
New York, N. Y.

COMER-AVONDALE MILLS, INC. 136
New York, N. Y.
Suppliers of: Yarns.

COWIKEE MILLS 136
Eufaula, Ala.
Suppliers of: Yarns.

Please turn the page

Continued from the preceding page

CROSS COTTON MILLS CO. 76
Marion, N. C.
Suppliers of: Yarns.

CUTTING ROOM APPLIANCES, INC. 128
New York, N. Y.
Suppliers of: Cloth laying machines, measuring and inspecting machines, and sectional metal cutting machines.

DAILY NEWS RECORD *(Publication)* 95
New York, N. Y.

C. R. DANIELS, INC. 109
Daniels, Md.
Suppliers of: Canvas baskets, hampers, trucks, and aluminum frame hosiery carriers.

DEAN & SHERK 83
Lawrenceburg, Ky.
Suppliers of: Yarns and threads.

DUBIED MACHINERY CO. 56
Long Island City, N. Y.
Suppliers of: Hand and power flat, Jacquard, and Links and Links knitting machines.

EASTERN YARN MILLS, INC. 44
Brooklyn, N. Y.
Suppliers of: Yarns.

A Friendly Welcome Awaits You

TI's booth is No. 104. Refer to the diagram on the opposite page and you will see that we are located just across from the elevators on the 46th Street side. Drop by to see us, won't you? Editorial, business, and circulation representatives will be there to greet you.

EDMOS PRODUCTS CORP. 48
Brooklyn, N. Y.
Suppliers of: Multi-feed rib body knitting machines for 1 x 1 or 2 x 2 fabrics.

FIDELITY MACHINE CO., INC. 138
Philadelphia, Pa.
Suppliers of: Universal and multi-design ribbers, 400-needle seamless ladies' hosiery knitting machines, Rolande uniform hosiery control system, wire covering machines, etc.

J. A. FIRSCHING & SON, INC. 18
Utica, N. Y.
Suppliers of: Collarette and strip cutting machines.

FLORENCE DYE WORKS 130
Woonsocket, R. I.
Suppliers of: Dyers of worsted, mohair, rayon tops and raw silk, and acetate.

FRANKLIN PROCESS CO. 60
Providence, R. I.
Suppliers of: Package dyed yarns.

GINSBERG MACHINE CO. 78
New York, N. Y.
Suppliers of: Thread trimming machines; special pressing machinery for knit goods.

GLOBE DYE WORKS 38
Philadelphia, Pa.
Suppliers of: Yarn dyers.

GOLDMAN PRESSING MACHINE CORP. 111
New York, N. Y.
Suppliers of: Pressing machines for knit goods.

HARRIET COTTON MILLS 36
Philadelphia, Pa.
Supplier of: Yarns.

HARRIS RESEARCH LABORATORIES 130
Washington, D. C.
Suppliers of: Harriset process for making wool shrink resistant.

HENDERSON COTTON MILLS 36
Philadelphia, Pa.
Suppliers of: Yarns.

HEMINWAY & BARTLETT MANUFACTURING CO. 92
New York, N. Y.
Suppliers of: Sewing threads.

HOSIERY & UNDERWEAR REVIEW *(Publication)* 82
New York, N. Y.

INDIAN ORCHARD FINISHING CO. 127
Indian Orchard, Mass.
Suppliers of: Dyers and finishers of knitted fabrics.

JACQUARD KNITTING MACHINE CO. 23
Philadelphia, Pa.
Suppliers of: Jacquard type circular knitting machines for outerwear.

JOHNSTON MILLS CO. 98
Charlotte, N. C.
Suppliers of: Yarns.

KASTRINSKY MACHINE CO., INC. 58
Brooklyn, N. Y.
Suppliers of: Finishing machinery.

JOSEPH KLUMPP CO. 105
Philadelphia, Pa.
Suppliers of: Yarns.

THE KNITTER *(Publication)* 112
Charlotte, N. C.

THE KNITTING MACHINE & SUPPLY CO. 20
New York, N. Y.
Suppliers of: Knitting and sewing machines, needles, etc.

KROY, INC. 40
Lowell, Mass.
Suppliers of: Shrinkproof wool.

LATTA, CURRIER CO., INC. 107
New York, N. Y.
Suppliers of: Yarns.

PERCY A. LEGGE 1
New York, N. Y.
Suppliers of: Yarns.

LIBERTY MARKING TAG CO., INC. 44A
Brooklyn, N. Y.
Suppliers of: Marking tags.

MacKNIGHT & ETHERINGTON BROS. 100
Philadelphia, Pa.
Suppliers of: Yarns.

MARKEM MACHINE CO. 118
Keene, N. H.
Suppliers of: Machines and equipment for box and label printing.

MASUREL WORSTED MILLS, INC. 140
Woonsocket, R. I.
Suppliers of: Yarns.

MEESE, INC. 71
Madison, Ind.
Suppliers of: Canvas trucks, baskets, hampers.

MERROW MACHINE CO. 69
Hartford, Conn.
Suppliers of: High speed trimming and overedging, overseaming, and hemming machines.

CLARENCE L. MEYERS & CO. 16
Philadelphia, Pa.
Suppliers of: Yarns.

MID-WEST PROCESSORS, INC. 35
Libertyville, Ill.
Suppliers of: Skein and package dyed yarns; also finish hosiery.

MODERN PRESSING APPLIANCES 137
Brooklyn, N. Y.
Suppliers of: Pressing equipment.

L. P. MULLER & CO. **25**
Philadelphia, Pa.
Suppliers of: Yarns.

THE NARROW FABRICS CO., INC. **10**
Reading, Pa.
Suppliers of: Hosiery and underwear elastics, braids, cluny laces, trimmings.

NATIONAL BUNDLE-TYER CO. **73**
Blissfield, Mich.
Suppliers of: Package tying machinery, loopers, and stringing machinery.

NATIONAL KNITTED OUTERWEAR ASSN. **Mez.**
New York, N. Y.

NEW YORK PRESSING MACHINERY, INC. **117C**
New York, N. Y.
Suppliers of: Pressing machines.

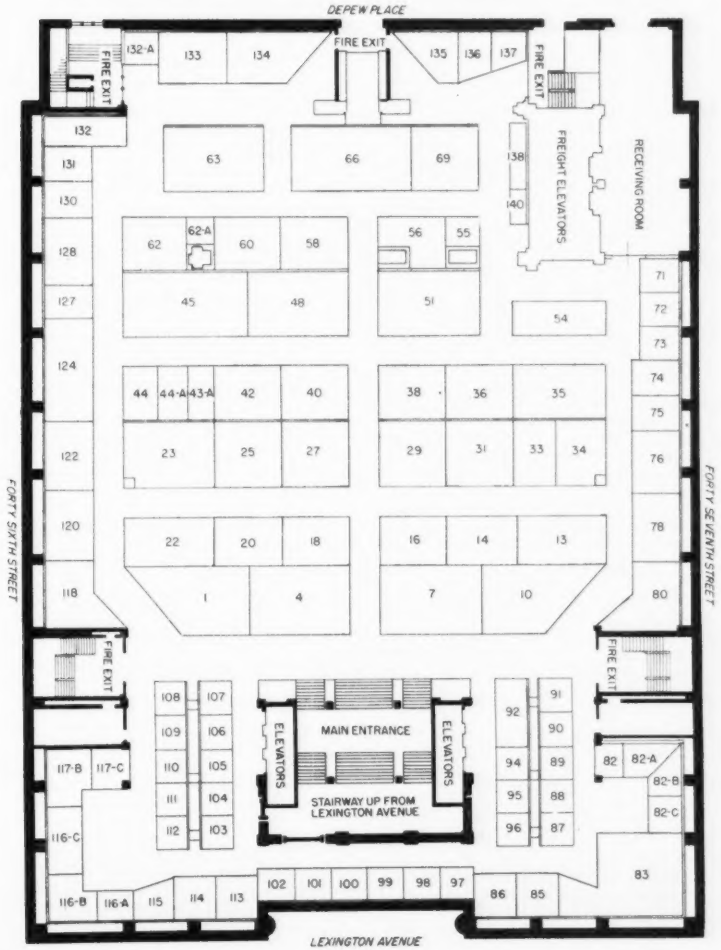
ORDNANCE GAUGE CO. **62**
Philadelphia, Pa.
Suppliers of: Circular body knitting machines.

JOSEPH PERNICK CO., INC. **101**
Maspeth, L. I., N. Y.
Suppliers of: Cloth turning machines, finishing

Please turn the page

Floor Plan—Knitting & Allied Crafts Exposition

To locate an exhibitor, note the number opposite his name in the directory; find that number on this diagram and there will be the space to be occupied by that firm.



PERNICK *(continued from preceding page)*
machines, and measuring and examining machines.

PHILADELPHIA DYE WORKS, INC. 110
Philadelphia, Pa.
Suppliers of: Yarn dyers and finishers.

PROCTOR & SCHWARTZ, INC. 132
Philadelphia, Pa.
Suppliers of: Hosiery boarding and preboarding machinery; drying machinery; machinery for Redmanized process.

THE PROSPERITY CO. 116C
Syracuse, N. Y.
Suppliers of: Power laundry, dry cleaning, and pressing machinery.

QUEENS MACHINE CO. 124
Brooklyn, N. Y.
Suppliers of: Fully automatic tandem carriage Link and Link (purl stitch) machines, flat machines, double head border machines, circular string border machines, accessories.

RAYON & SYNTHETIC TEXTILES *(Publication)* 135
New York, N. Y.

THE REECE CORPORATION 33
Boston, Mass.
Suppliers of: Eyelet end buttonhole machines for knitted outerwear and straight hole machines for knitted underwear; label sewer.

ROBERT REINER, INC. 66
Weehawken, N. J.
Suppliers of: High speed tricot knitting machines, Raschel type knitters, full-fashioned hosiery knitting machines, stop motions, creels, warpers.

THE ROYAL COTTON MILL CO. 106
Saxapahaw, N. C.
Suppliers of: Yarns.

KURT SALMON ASSOC., INC. 72
Washington, D. C.

SCHOLLER BROS., INC. 122
Philadelphia, Pa.
Suppliers of: Soaps, softeners, synthetic detergents, and finishes.

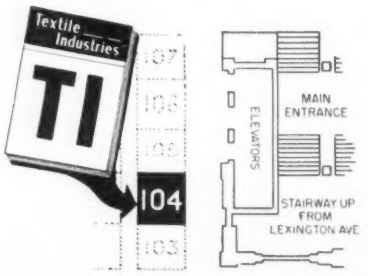
SCOVILLE MANUFACTURING CO. 22
Waterbury, Conn.
Suppliers of: "Gripper" fasteners for boxer shorts, children's knit underwear and sleepers.

SELLERS MANUFACTURING CO. 106
Saxapahaw, N. C.
Suppliers of: Yarns.

SHELL OIL CO. 133
New York, N. Y.
Suppliers of: Petroleum lubricants.

SINGER SEWING MACHINE CO. 45
New York, N. Y.
Suppliers of: Industrial sewing machines.

You Can't Miss It!



For Show Tickets

Just pull off the business reply card on page 258, tell us, in the space provided, how many tickets you need, sign it, and mail it to us. Stamps are not required—TI will pay the postage. Tickets will be on their way the day your request is received.

SPUN FIBERS, INC. 83
Mt. Holly, N. C.
Suppliers of: Yarns.

STAMPAGRAPH CO., INC. 91
New York, N. Y.
Suppliers of: Hot iron transfers, embossed seals and labels.

STANDARD-COOSA-THATCHER CO. 34
Chattanooga, Tenn.
Suppliers of: Yarns.

STEELE CANVAS BASKET CO., INC. 96
Cambridge, Mass.
Suppliers of: Canvas baskets and trucks.

STONE BOILER EQUIPMENT CORP. 116A
New York, N. Y.

STOP MOTION DEVICES CORP. 131
Brooklyn, N. Y.
Suppliers of: Electric stop motions for all types of knitting machines, hole and press-off detectors, and retractable needle detectors.

SUPREME KNITTING MACHINE CO., INC. 63
Brooklyn, N. Y.
Suppliers of: Circular body knitting machines.

SURPASS CHEMICAL CO., INC. 102
Albany, N. Y.
Suppliers of: Chemicals for bleaching and dyeing.

TEXTILES, INC. 90
Gastonia, N. C.
Suppliers of: Yarns.

TEXTILE AGE, INC. *(Publication)* 43A
Greenwich, Conn.

TEXTILE INDUSTRIES *(Publication)* 104
Atlanta, Ga.

TEXTILE WORLD *(Publication)* 74
New York, N. Y.

THREADS, INC. 89
Chicago, Ill.
Suppliers of: Sewing threads and knitting yarns.

THE TORRINGTON CO. 13
Torrington, Conn.
Suppliers of: Knitting machine needles, needle bearings, and other precision items.

TUBULAR TEXTILE MACHINERY CORP. 54
Woodside, L. I., N. Y.
Suppliers of: Wet spreading, extracting, drying, calendering, and finishing equipment.

UNDERWEAR INSTITUTE, INC. Mez.
New York, N. Y.

UNION CARBIDE & CARBON CO. 108
New York, N. Y.
Suppliers of: Dynel yarns.

UNION SPECIAL MACHINE CO. 31
Chicago, Ill.
Suppliers of: Industrial sewing and seaming machines.

UNITED ELASTIC CO. 94
Easthampton, Mass.
Suppliers of: Woven and braided elastic webs.

U. S. HOFFMAN MACHINERY CORP. 120
New York, N. Y.
Suppliers of: Pressing machines.

U. S. RUBBER CO. 7
New York, N. Y.
Suppliers of: Yarns.

FRANK URISH 99
Bayside, L. I., N. Y.
Suppliers of: Button and buttonhole marking machines.

UTICA NOVELTY & MILL SPECIALTY CO. 14
Utica, N. Y.
Suppliers of: Laying-up machines, strip cutters, extractor loaders and unloaders, conveyors, rotary garment presses, calendering machines, inspection machines, dryers, and stainless steel dyehouse equipment.

VEEDER-ROOT, INC. 103
Hartford, Conn.
Suppliers of: Course counting devices.

WILLCOX & GIBBS SEWING MACHINE CO. 27
New York, N. Y.
Suppliers of: Industrial sewing machines.

WILLIAMS LAUNDRY MACHINE CO., INC. 55
Long Island City, N. Y.

We'll be looking for you—
BOOTH 104

Consumer Survey Report: "Dacron" Polyester Fiber

The outstanding wrinkle resistance and ease of care claimed for "Dacron" polyester fiber when it was first introduced were demonstrated recently, the DuPont Co. reports, by the results of a consumer survey based on approximately 6000 summer suits made from fabrics containing "Dacron."

Two types of suits were surveyed—one was made of 100% "Dacron" and the other a blend of 55% "Dacron"-45% wool. The majority were sold last June. Names of 2300 purchasers were obtained and questionnaires were mailed to them in September so that results would reflect a full summer's experience. Questionnaires returned amounted to 60% of the total sent out, the company said. In addition, a separate research group conducted personal interviews with 50 purchasers of each suit in order to add a qualitative analysis to the quantitative results of the mail surveys.

Survey findings, as reported by the company, are summarized here:

Wrinkle Resistance. Over 90% of respondents were pleased and satisfied in this regard. Some who were disappointed commented that suits were "not wrinkle proof" as they had mistakenly assumed. 8 out of 10 said wrinkles that did form "hung out" satisfactorily. Approximately 90% said suits needed "less frequent" pressing than other summer suits. Large number had suits pressed only when they were cleaned.

Ease of Care. Nearly 9 out of 10 reported suits were easy to care for. Most said "less frequent cleaning" was needed. Many said spots were easily removed at home by soap and water or cleaning fluids. No difficulties were encountered in commercial cleaning.

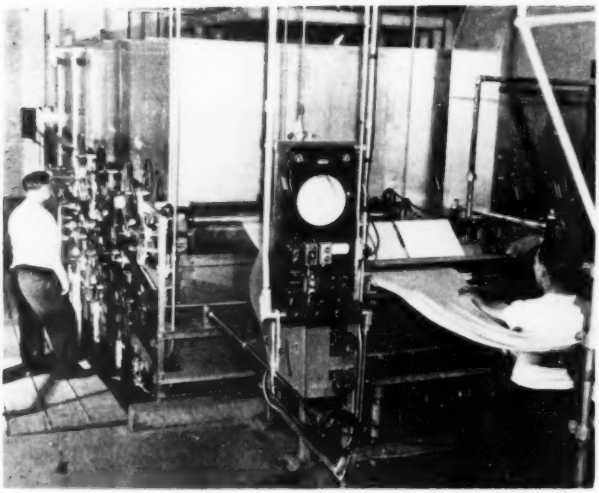
Appearance, Feel, and Tailoring. Majority considered both suits to be satisfactory or superior in all of these respects. Desire was expressed by many for a greater variety of colors, patterns, textures, and stylings.

Coolness. Suits were judged by most to be equal or superior to other summer suits from the standpoint of comfort. Praise of coolness and comfort was frequently encountered, particularly for the blended fabric which was slightly lighter in weight and of a very porous construction.

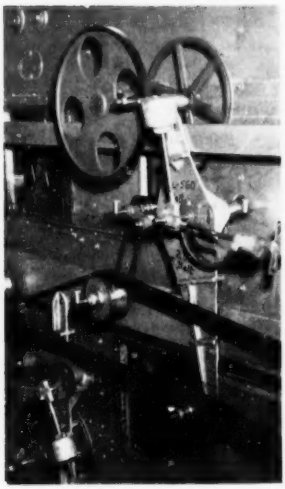
Vulnerability to Ashes. Melting of holes, usually by glowing tobacco ash, was mentioned by less than 2% of purchasers of the blend, and by 7½% of those with 100% "Dacron" suits. Only 6 men indicated that they "would not rebuy" for this reason. (Anti-melt finishes are being investigated by Du Pont.)

Static. Awareness of static was mentioned by 3% of wearers of 100% fabric. Three "would not rebuy" because of it. No wearers of blended fabric mentioned static.

Willingness to Rebuy. More than 3 out of 4 said they would buy another of these suits.



SATURATED CLOTH from the dyehouse is positioned at the wet entry of the Tube-Tex drying range. Cloth is wet spread, extracted, chemically processed, dried, and cooled in a continuous flow. Variable-speed edge and overfeed drives guard against drag throughout the entire operation.



SIX REELS support the knit goods in transit through the dryer. Each reel is independently driven according to the tautness or slackness of the fabric.

Tensionless Processing Improves

Staff Prepared

TUBULAR KNIT GOODS are being finished on a continuous Tube-Tex drying range and three Tube-Tex tensionless calenders at Utica Knitting Company's Utica, N. Y., mill. Many months of operation have demonstrated this machinery's capacity for neutralizing troublesome lengthwise tensions usually introduced when bleaching, dyeing, roll-up, and napping tubular knit fabrics. Now that stretch has been brought under control, Utica is able to turn out a uniformly dimensioned cloth from each given-sized roll.

In addition to raising quality, this installation is saving a considerable number of manhours. Also, production has been materially increased. Utica can handle as much as 1000 pounds an hour of knitted fabric under identical and reproducible conditions on the drying range.

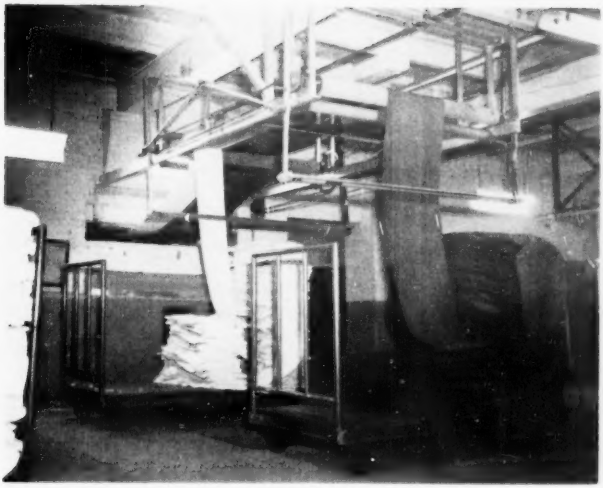
Drying. "Drying" range may well be a misnomer for the continuous processing unit—drying is only one of its functions. The range combines wet spreading, extracting, chemical processing, drying, cooling, and dry folding processes.

Operated by two men, it replaces many individual pieces of equipment including wet spreaders, centrifugal extractors, chemical applicators, vertical stack dryers, and batching apparatus that necessitated piece-by-piece operations which were not only susceptible to variation but also lowered output and consumed hours of labor for handling. The vertical stack dryers alone were said to require the services of five or six operators.

Flow of Goods Through Dryer. From the time cloth leaves the dyehouse until the time it is laid out on the cutting table, overfeed, edge, and tension control drives guard against any dimensional changes. The only interruption in flow occurs between the dryer and calenders where cloth is flat folded upon delivery from the dryer for transportation to the calender section.

The finishing process begins when saturated cloth—brought up from the dyehouse in perforated-bottom, stainless-steel trucks—is positioned at the wet entry of the dryer. Two strings are processed side by side through the range provided their combined width is not greater than 42 inches and their constructions are comparable. Internally driven spreaders, adjustable from 9 to 30 inches, open the tube to the body size desired in advance of a pair of extraction rolls. Pressure of squeeze is set to

EXCLUSIVE



CLOTH IS PLAITED upon emerging from the cooling chamber of the range. Moisture regain at this stage varies from three to five per cent, but is brought to normal regain in the calendering operation. Overall range speed is variable within limits of 10 to 60 yards per minute.

Utica Knitting's new finishing range has

- ***increased production***
- ***reduced lengthwise shrinkage***
- ***facilitated cutting and sewing***
- ***assured production of uniform garments***

Knitted Garments

remove approximately half of the moisture in the fabric.

In an immersion bath that follows, softening agents, non-curl finishes, various water repellents, or other water soluble chemical finishes are applied. Surplus liquor is squeezed off by a pair of processing rolls whose pressure may be adjusted according to pick-up desired.

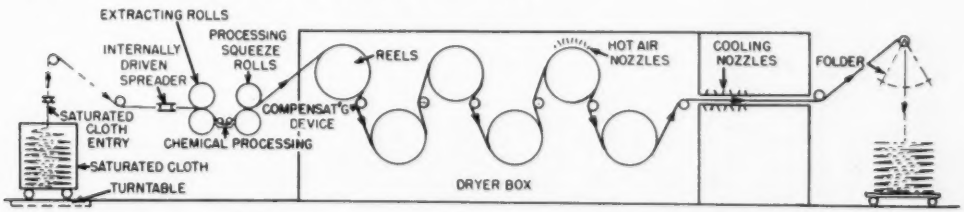
During the drying stage, control of tension is most critical. Here, great emphasis has been directed towards the elimination of drag and relaxing the fabric to insure a stabilized product. The cloth is passed around a series of four-foot diameter wire mesh reels, six in number, in the dry box.

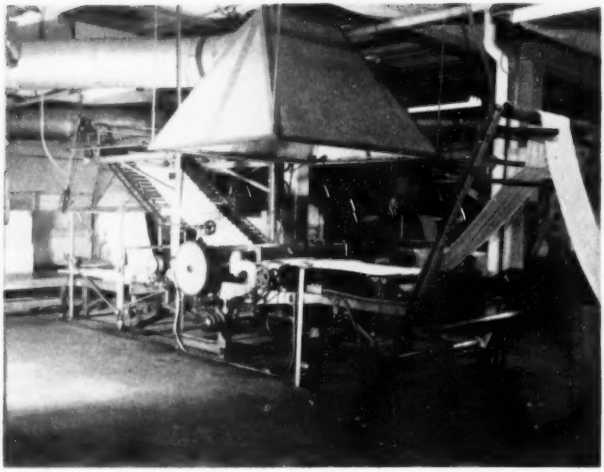
A belt drive, powered by a 5 hp motor, is designed to revolve each reel independently and at speeds varying to suit the tension of fabric. A dancer-type compensator roll, governed by tautness or slackness of the cloth in contact with it, actuates each reel drive. The tension sensitivity of each compensator roll can be regulated to suit the processing characteristics of T-shirt and light weight balbriggans as well as the heaviest sweat shirt fabrics and fleeced jerseys.

The over-all range speed is variable within the limits of 10 to 60 yards per minute. Normal processing calls for speeds from 25 to 40 yards per minute although speeds up to 50 yards per minute are not uncommon for light weight fabrics.

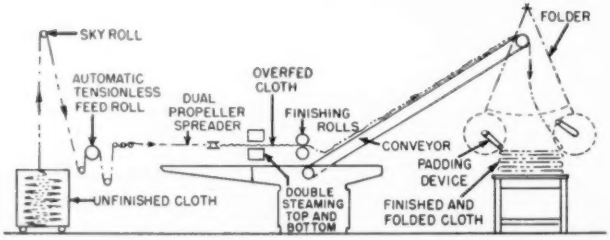
Concentrically located around a portion of each reel's periphery is a bank of nozzles which impinge hot air through the cloth. A motor-

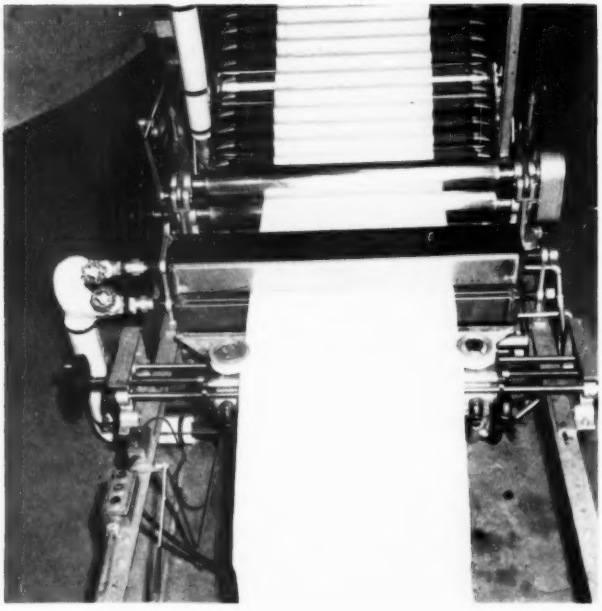
TUBE-TEX DRYING RANGE, combining operations of wet, extracting, chemical processing, drying, cooling, and dry folding. Two strings can be processed simultaneously.





TENSIONLESS CALENDERING is the feature of this machine. The fabric is entirely relaxed during steaming, and then calendered to set its true dimensions. See sketch below for components and path of fabric through the machine.





EDGE DRIVES on the calender eliminate bowing. Crosswise ripples in the fabric are introduced by overfeeding which gives the material an opportunity to seek dimensional stability during the operation.

operated baffle is used to close off unused sectors at the outer edges of the reels, thereby yielding greater efficiency. For example, the effective length of each reel may be reduced to 42 inches should strings that wide be processed through the range.

Two fans, rated at 50,000 cfm, recirculate 90 per cent of the heated air. Temperature of make-up air and interior air is maintained between 290 and 330 F, commensurate with cloth construction, by regulators mounted near the heater coils which are serviced with 125 psi steam. Nozzles are adjusted so that the volume of air impinged on the cloth is progressively lower as the cloth proceeds from reel to reel. In so doing, the cloth is protected from over-drying while it has an opportunity to stabilize after the bulk of moisture is evaporated in the initial passes.

After drying, the cloth is passed through a 12-foot long cooling chamber in which air at 60 to 70 F is impinged on both sides of the fabric. The cloth is then plaited into trucks and transported to the calender section.

The range's instrument panel includes: start-stop switch for main control; individual control switch for drive motors; blower control switch for preheating dryer; exhaust fan switch—automatic, manual, and off positions; nozzle baffle motor drive switch; main blower on-off indicator lights; speedometer calibrated in yards per minute; temperature and pressure regulator and recorder.

Calendering. The Tube-Tex

Machinery Makers' Association Name Changed

At the annual meeting of the National Association of Textile Manufacturers held on February 5 at the Sheraton-Plaza Hotel in Boston, Mass., the name of the Association was changed to American Textile Machinery Association, effective immediately. The reason given for the change was simply to have the name of the Association more concise and easier to handle in correspondence, publicity, etc.

The election of officers and directors took place, and the officers for the ensuing year are: president, J. Hugh Bolton, of Whitin Machine Works; vice-president, Frederick W. Howe, Jr., Crompton & Knowles Loom Works; treasurer, Samuel F. Rockwell, Davis & Furber Machine Co.; secretary, Max F. Thompson, Whitin Machine Works.

William K. Child, vice-president in charge of sales, Draper Corporation, was chosen to be chairman of the Committee planning the 1954 American Textile Exhibit in Atlantic City, New Jersey.

Fourth Year Book of the Textile Institute

The fourth "Year Book of the Textile Institute" (for 1951-52), which is now available, includes in its 338 pages several new features: a list of more than 150 films on textile subjects and the sources from which these may be obtained; a catalogue of more than 2,000 publications in the Institute's library; and a note, by R. C. Palmer, on methods of calculating standard deviations.

The book also includes a list of current textile literature, summarizes standards relating to textiles, gives a full list of terms and definitions so far published by the Institute, and sets out in tabular form information on yarn count systems.

Addresses of research associations, textile societies, and textile and other organizations are given; also a list of approximately 140 patrons and almost 5,500 Institute members.

calendering operation gives the cloth its final finish, conditioning it for the cutting table. Fabric is fed into the machine over a series of rollers and guides at speeds up to 45 yards per minute. From the take-off, the cloth passes through dual propeller spreaders that feed it forward without tension and sized to the proper width to the calendering rolls.

Widths are determined according to fabric and dimensional stability factors correlated in the mill's control laboratory. As the cloth passes over the propellers, it is steamed from top and bottom by high speed jets. Steaming relaxes the fibers and stitches, permitting the cloth to adjust to natural size. In this condition, it is calendered, overfed to a conveyor, and then to a tensionless folding mechanism. Accessories for the machine permit calendering of 8 to 40-inch widths.

This uniformly dimensioned and conditioned knitted cloth can be laid up and cut in the cutting rooms much more accurately than material calendered by Utica's older equipment, thus assuring better quality garment assemblies.

Maintenance Schedule For Reel Dryer Range

Wash Squeeze Rolls. Wash rubber squeeze rolls daily after work, using solution of one pound soda ash per five gallons water.

Clean Squeeze Rolls. For removal of stains from rubber squeeze rolls not removed by soda ash solution, use soap and water or carbon tetrachloride. Do not use benzine, gasoline or other solvents.

Edge Drive Rolls. Turn and reverse rubber edge drive rolls regularly and at least once weekly.

Edge Drive Cases. Edge drive casings are to be kept filled with oil comparable in viscosity to SAE 30 crankcase oil. Flush and refill once monthly.

Squeeze Roll Bearings. Grease squeeze roll roller bearings once weekly. Rolls should be rotating without load for thorough penetration of lubricant.

Main Drive Variable Pulleys. Lubricate main drive variable speed pulleys once weekly with one shot of grease. Avoid over-lubrication.

Reel Pulleys. Remove, disassemble, clean, and adjust variable speed pulleys driving dryer reels four times yearly. Assemble dry.

Heaters. Clean dryer heater fins once weekly for normal operation, using compressed air.

Fan Tube Lubrication. Maintain proper level of oil of recommended type in dryer fan tube reservoir. Always check level with fans in operation.

V-Belts. Examine all V-belts periodically and replace when signs of excessive wear show.

General Lubrication. Lubricate with oil and grease at all indicated points according to machinery manufacturer's instructions.

TRAINING ON NEW EQUIPMENT is a "must" for the laboratory supervisor. He should be the first to learn to operate the instrument; then immediately train others to do the work.

CLEANING AND LUBRICATION of testing machines at regular intervals is just as important as it is for production machinery in the mill. Use lubricants recommended by the manufacturer.

Are Your Testing

THE IMPORTANCE of testing in the modern textile plant is so widely recognized that there is hardly a point for arguing whether testing should be done or not. Practically every mill makes tests in some form, even if nothing more than weighing and breaking the yarn or cloth. At the other end of the scale are the mills with complete air conditioned laboratories, equipped to test the product from bale to cloth room.

If the laboratory supervisor has the proper concept of his responsibilities he must realize that test results should be accurate within a small tolerance, otherwise the mill is wasting money in having the tests made. The laboratory supervisor wants to have that complete confidence in the work that his laboratory turns out, which confidence must in turn be shared by the mill management. Dependability of the laboratory functions can be assured.

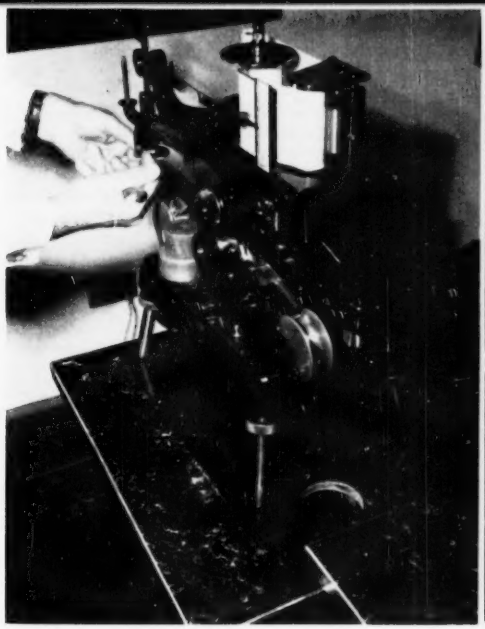
Laboratory Personnel. Although testing instruments are important, the staff of technicians is more important. As much as management would like to see everything up to standard, no mill manager in his right mind would want someone to "doctor" the test figures to make the results look good. So the first requisite is that every operator in the laboratory be conscientious. Certainly they will make mistakes—everyone does—but they will not knowingly put down figures just to make a test look good.

Educational requirements vary according to the type of work to be done. The minimum should be a high school education, and for certain chemical and other highly specialized tests, the requirements should be higher. At least one individual should have some knowledge of statistics so that test results can be evaluated on the basis of modern criteria.

The laboratory supervisor should have complete authority to hire and train his technicians. The same principles employed in training an operator in the plant will apply in training a laboratory technician, so a course in job methods training should be of value to the supervisor. Bad work habits, once acquired, are hard to break, so the individual should be taught the correct procedure in the first place.

In the average mill laboratory a certain amount of routine work has to be done each day, in addition to all kinds of special testing. It is important that the work be handled efficiently, otherwise the laboratory may become a bottleneck and actually hold up production machines in the mill.

It is practically impossible for any individual to work every day,



CORRECT CALIBRATION of laboratory testing machines is essential for accurate test results. Special equipment and trained personnel are required for the calibrations of some machines. Laboratory personnel can calibrate others like the Saco-Lowell sliver tester (left photo) and the Belger roving tester (right photo). Calibration intervals should be established in accordance with manufacturer's recommendations.

Results Reliable

By HORACE L. PRATT

month in and month out; therefore at least two technicians should be able to conduct every important test efficiently. The same caution applies to record keeping, filing, checking specifications, and making up test reports. It is difficult for the supervisor to avoid having some routine duties, especially in small and medium-sized laboratories, so he must be sure that some member of the staff understands and can perform these duties, in his absence.

The supervisor should be the first to operate a new instrument, or to perform new tests, but as soon as he has mastered the details he should immediately train others to do the work. If the procedures are at all complicated they should be written out in detail, listing each step in its proper sequence. In this way, tests which at first seem to involve complicated procedures can be made comparatively simple to perform. The laboratory supervisor should follow up to see that the new tests, as well as old familiar tests, are being made according to instructions and specifications.

Accuracy. In the plant where materials to be weighed or measured are bulky and in long lengths, and where vibration may cause scales to vary as much as one-quarter to one-half a pound, and where measuring may be done by counters which are not correct to the exact inch, a little inaccuracy may be tolerated. But in the laboratory where weighing is in grains or even in milligrams, and where measuring is done on short lengths, accuracy is of extreme importance.

Fractions cannot be ignored. In fact, in certain instances they may have to be rounded off to three or even four places. The supervisor should make a careful study of each calculation pertaining to the various tests and determine, to the best of his ability, the degree of accuracy required. The technicians should be instructed accordingly. The supervisor should insist on sufficient checking of calculations to assure that the information contained in reports and records is mathematically correct—not only correct figures, but also correct methods and formulas.

Maintenance of Laboratory Instruments. It is just as important to keep the machines in the laboratory properly lubricated and in good repair as it is to maintain the production machinery in the mill. Usually the manufacturers of

More Textile Series Reports Available

On pages 87, 88, and 90 of the January, 1948, issue of TEXTILE INDUSTRIES a list of "Textile Series Reports" available from the Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C., was published.

Recently it was announced that in addition to the reports contained in that listing the following are available:

50. Second Report of the A. S. T. M. Task Group Studying the Wyzenbeek Precision Wear Test Meter by S. J. Tanenhaus & Gerald Winston; July 1948.

51. Correlation of Simulated Rainfall Tests with Laboratory Penetration Tests by M. I. Landsberg; Sept. 1949.

52. The Relationship Between the Structural Geometry of Textile Fabrics & Their Physical Properties by Stanley Backer; August 1948.

53. Quartermaster Corps Accelerated Test Method for Evaluating Shrink Resistant Wool as Developed for 10½ oz. Wool Shirting by Louis I. Weiner; September 1948.

54. An Improved Multipurpose Abrasion Tester and Its Application for the Evaluation of the Wear Resistance of Textiles by R. G. Stoll; March 1949.

55. A Study of Some Factors Affecting the Shrink-Resistance of Wool by the Harris Research Laboratories, Washington, D. C.; May 1949.

57. Factors Affecting the Relaxation Shrinkage of Knit Underwear Tubing—A Preliminary Report by Louis I. Weiner; June 1949.

58. Identification of Organic Dyestuffs by X-Ray Powder Diffraction by G. V. Susich; June 1949.

59. A Study of the Effects of Form Factors on the Translation of the Inherent Physical Properties of Textile Fibers Into Textile Structure by W. J. Hamburger, M. Platt & M. W. Ross; July 1949.

60. Mechanics of Elastic Performance of Textile Materials—Some Aspects of Stress Analysis of Textile Structures—Continuous Filament Yarns by Milton M. Platt; July 1949.

61. The Relationship Between the Structural Geometry of Textile Fabrics & Their Physical Properties—Part II on Wear Resistance by Stanley Backer; September 1949.

62. Mechanics of Elastic Performance of Textile Materials (Some Aspects of Stress Analysis of Textile Structures—Staple-Fiber Yarns) by Milton M. Platt; April 1950.

63. Some Felting Properties of Wools of Different Geographical Origins by A. M. Sookne, H. Bogaty & M. Harris, Harris Research Laboratories; September 1950.

64. Tensile Recovery Behavior of Textile Fibers by George Susich & Stanley Backer; November 1950.

65. Laboratory Evaluation of the Wear Resistance of Nonwoven Fabrics by R. G. Stoll.

66. Effect of Construction on the Laundering Shrinkage of Knitted Woolens prepared jointly by the staff of the Harris Research Laboratory, Washington, D. C., and the Textile Finishing Research Laboratory of the Philadelphia Quartermaster Depot; April 1951.

67. Summary of Specification Requirements for Quartermaster Textiles (Revised); February 1951.

testing machines and instruments issue pamphlets giving complete instructions for the lubrication and maintenance of the machines. The instructions should be studied by the supervisor, who should then instruct the technician who has been assigned the responsibility for the care of the laboratory machines and instruments.

Cleaning and lubrication should be on a definite schedule, just as in the mill; however, many of the pieces of equipment to be serviced are delicate, and caution must be exercised, especially in cleaning. The lubricants recommended by the manufacturer should be used.

If a considerable amount of loose fibers, sliver, and roving is run in the laboratory, a great deal of lint will accumulate on everything in the room, and some of the lint will get into the bearings on the machines and produce excessive wear unless the parts are cleaned thoroughly at frequent intervals. A "frozen" bearing can retard the speed of a machine, thereby destroying its calibration, especially if speed is an important factor in its operation.

Repair work on testing machines and instruments should be done only by qualified personnel. If the work is a job that can be handled by the mill's repair shop, the best mechanic should be assigned to the job. In many instances the machines have to be returned to the factory so that calibration can be done at the same time repairs are made. Instruments to be shipped should be carefully packed. The instruments should be wrapped with plenty of soft, resilient material, and if possible the tops of the crates should be put on with screws to facilitate opening without damage to the instruments. The crates should also be marked "Delicate Instruments," with the top marked "This Side Up."

Scales and Balances. Accurate weights may be obtained in the laboratory only when weighing devices of the correct range and capacity are available and if these devices are kept in good condition. It is important that scales be kept clean and free from lint and dust. Worn knife-edge bearings will give incorrect weights. The oil in dashpots must be changed periodically because lint and dust will thicken the oil and disturb the calibration. Test weights of known accuracy should be employed at frequent intervals, and if correct calibration cannot be established the scale should be returned to the manufacturer or sent to a reliable scale repair shop for reconditioning and calibration.

Calibration. The laboratory supervisor can never be sure that his test results are correct unless he knows that his machines and instruments are correctly calibrated. Some machines require special equipment and trained personnel for calibration. An example is the Scott horizontal cloth tensile strength tester. (Scott Testers, Inc. will, on request, send a service man with the necessary equipment for reconditioning and calibrating these machines.) Their skein testers may be calibrated by laboratory personnel, using special test weights furnished by the manufacturer.

Most yarns and fabrics are broken on machines while the

pulling clamp moves at an established rate of travel or traverse. Speed or traverse, as specified by the American Society for Testing Materials, is 12 inches per minute. Goods for export may have to be tested at some other rate of traverse. At least once each month, the supervisor should have each of these machines checked with a stop watch to be sure that the correct speed is maintained. If the machines are driven by V-belts, the belts may become worn, thereby changing the speed ratio of the pulleys. "Frozen" bearings may be a factor in reducing the speed of a machine of this type.

Recording devices on laboratory instruments should be checked at intervals, following the procedure outlined by the manufacturer. Use only charts furnished by the manufacturer of the machine to be sure that the chart lines are accurate.

Saco-Lowell Sliver Tester. The Saco-Lowell sliver tester is standard equipment in many laboratories, especially those which do control testing. Some time ago our card room personnel complained that some of the "faulty" cards which we had reported, were really in good condition but the trouble lay in the sliver tester.

An examination of the charts in question revealed a definite pattern which we found was due to an accumulation of gummy waste in the groove of the roller used for testing roving.

Just to see what would happen, we ran the sliver-out rack and fine adjustment to zero and started the machine. The pen line ran comparatively straight and slightly below the zero line.

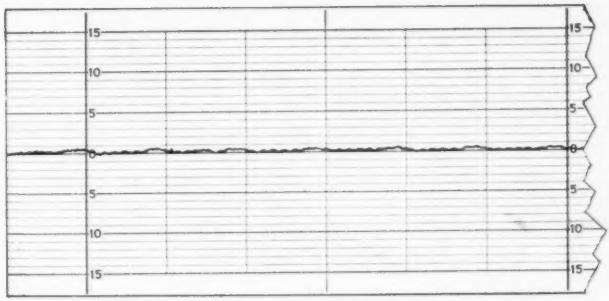


FIG. 1. Pen line "zeroed in" with no stock in the sliver tester and with clean groove.

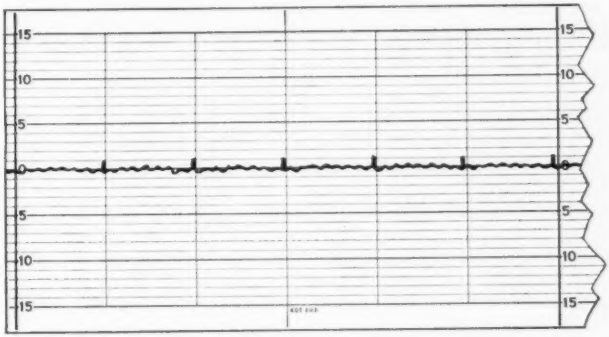


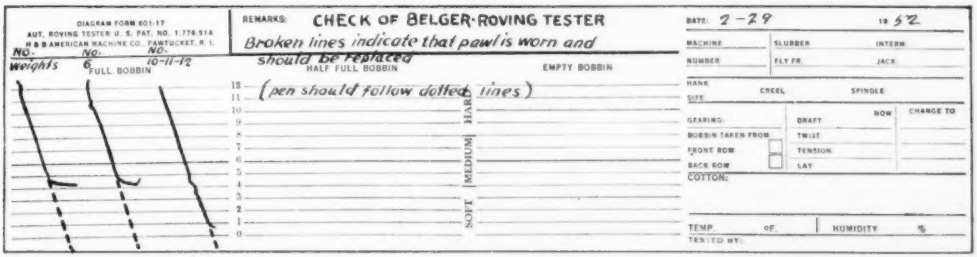
FIG. 2. Pattern made by gummy accumulation in the groove and with no stock in the machine.

We assumed that the pen line should coincide with the zero line; therefore the machine was adjusted accordingly. Fig. 1 shows a section of the chart after the adjustment was made.

A few weeks later upon checking the calibration of this instrument by our method, we found that a pattern was being made on the chart as shown in Fig. 2. The pattern was caused by the same kind of accumulation which gave us trouble the first time, except this time it was in the sliver groove. The accumulation of grease and lint was small, but it was enough to cause a variation of .001" on the chart. We assume that the variation was added to the sliver passing through the groove, thereby making a borderline sliver into a poor sliver by the addition of the extra .001".

Belger Roving Tester. Also

FIG. 3. Pattern made on Belger roving tester revealed that the pawl, which runs in the threads of the screw pin underneath the machine, was badly worn. Dotted line indicates path pen should have taken.



Pension and Profit-Sharing Plan Policy Announced by WSB

The Wage Stabilization Board has announced its policy on employee pension plans and profit-sharing plans. The two types are covered in a single regulation, General Wage Regulation 21, and either can be placed into effect without prior approval by the WSB, the National Association of Hosiery Manufacturers points out, provided they meet certain minimum requirements. These have been outlined by the Association as follows:

An employer (or employer and union, as the case may be) is required to file details on a proposed plan directly with the Wage Stabilization Board, Washington 25, D. C., and he will be notified that the report has been received. Unless further communication is received from the WSB within 30 days from date of the acknowledging letter, the plan may be put into effect as of its effective date. Final approval of a plan, however, is conditioned upon approval under appropriate sections of the Internal Revenue Code.

For setting up new pension plans or amending existing plans, the following requirements must be met:

1. Retirement age must be at least 65, and reduced benefits are required in case of earlier retirement.
2. Benefits shall be spread out over the lifetime of the employee, except in the case of death benefits.
3. Payment of any vested interest to an employee who retires early shall be deferred until the normal retirement date.

For setting up new profit-sharing plans or amending existing plans, these requirements must be met:

1. Benefits may not start until at least 10 years after an employee's admission to the plan.
2. Payments must be spread over at least a 10-year period.
3. There may be no immediate cash or loan value from the employer's contribution, except in case of the employee's death.

Under GWR 21, existing pension plans or profit-sharing plans of the deferred compensation type may, without modification, be extended to smaller employee units within the same plant, or extended from a group of employees in one geographical unit of a multi-plant employer to a similar group of his employees in another location. Such extensions may be made even though the particular plan does not meet requirements for new or amended plans as set forth above.

In WSB Resolution 85, the Board stated that if a plan, when submitted to WSB, does not meet the above requirements, or appears to the Board to be unstabilizing, the plan will be considered by a division of the Board. Reports of such plans will be treated as petitions for Board approval, and parties submitting the plans will be so advised. Such plans may not be put into effect unless and until Board approval has been received.

Parties who have established or modified a plan of the type covered by GWR 21, under GWR 6 (covering 10% "catch-up" raises) since January 25, 1951, may petition the Board to eliminate the cost of such a plan from the amount chargeable against the permissible general wage increase under GWR 6, to the extent that such cost was so charged.

Forms on which to report pension or profit-sharing plans to the WSB in Washington are being prepared, but as yet there is no indication when they will be ready.

found in many control laboratories is the Belger roving tester. Instructions for calibrating include running the machine without roving, allowing the pen to travel from the top to the bottom of the chart—first with no weights, then with weight No. 6, and again with weights No. 10, 11, and 12. Sometime ago upon calibrating this instrument we found that it made a chart as shown in Fig. 3. An examination of the machine revealed that the pawl, which runs in the threads of the screw pin underneath the machine, was badly worn. A new pawl was ordered at once.

The accompanying examples should serve to show the importance of periodic calibration of testing machines and instruments.

Single Yarn Twist Tests. Many mill laboratories are called upon to make single yarn twist tests. The test results should be as accurate as possible, but so far as we know, there is is no practical method of determining when all of the twist has been removed from the yarn. The so-called "untwist-twist" method is usually employed. This method calls for the insertion of the yarn (usually 10 inches) under a definite tension, removal of the twist, and re-insertion of the twist under the same tension. The resultant reading of the counter is then divided by two.

The supervisor should train the technicians who are to make the twist tests. The technique and amount of tension to be used for different yarns should be explained. The supervisor should study the type of build or wind used by the spinning room, and by extensive experiments he should determine whether the twist differs from one point on the bobbin to another. It is important to know whether the yarn is wound from the side of the bobbin or over-end and to remove the yarn (after the twist test) in the same manner that is employed in spooling or winding.

Many of the foregoing statements may seem to be small details, but they are nevertheless important to the laboratory supervisor if he is to be sure that his reports and records are accurate and dependable.

Dyeing Dynel Stock, Yarn, Hose

Assistance for dyers processing this new fiber

By T. A. FEILD, Jr.
Carbide & Carbon Chemicals Co.

WHEN DYEING dynel, the dyer has latitude in dyes and procedures. Basic requirements: (1) dye at 205 F or above; (2) maintain luster; (3) remember fiber is thermoplastic.

Acetate Dyes. Use minimum dispersant. Dynel will blush in boiling water or at 205 F; to avoid, add sodium sulfate midway of dyeing.

Acid Dyes. For pastel shades. Apply dye from acid bath at boil, no assistants; wet out thoroughly first.

For medium shades. Low amounts of copper sulfate with zinc formaldehyde sulfoxylate to reduce the copper are added to bath at room temperature; then add dye, carry out at boil for 60 minutes; adjust bath to pH 5. The cuprous ion increases dye affinity.

For heavy shades. Swelling agent p-phenylphenol (up to 2.25%) at start of dyeing (in micronized form or soluble sodium salt, and subsequently neutralized). Adjust bath to pH 6 with sulfuric acid before adding copper sulfate and reducing agent. Add dye, carry out at boil 60-90 minutes, or until secure correct shade. Swelling agent permits more dye sites to be reached.

Blushing prevented in above methods by sodium sulfate, or fiber relustered after dyeing with salt solutions or dry heat.

Controlled Addition of Copper. Mix cold solutions of copper sulfate and its reducing agent, add at controlled rate to boiling dyebath; rate of feed determines rates of color exhaustion and buildup. Benefits of method: less reduced copper employed—that used is consumed, does not accumulate in bath; color values are increased; good control.

From paper presented before Southeastern Section, AATCC, at Talladega, Ala., on Feb. 8.

Acetate-Acid Dye Mixtures. Dye at boil with both type colors present, usually without swelling agent. After 20 minutes adjust dyebath to pH 6, then drip into boiling bath a cold mixture of copper sulfate and zinc formaldehyde sulfoxylate to exhaust acid dye. Add one or other dye to correct shade.

Selecting Dyes-Methods. Acetate dyes: have excellent leveling, very good wash fastness, excellent light fastness (especially blue component). Acid dyes using copper technique: Outstanding wash and light fastness, require less dyestuff for heavy shades, pastel shades simple to obtain, no dye assistant. Acid and acetate dyes (copper technique): for heavy shades with excellent wash and light fastness.

Stock Dyeing. In closed machines use minimum agents that foam, add anti-foam agent, load at 150 F. To secure soft cake, turn off pump at end of dyeing, drain, refill for rinse with cold water (sets expanded cake). When no pressure is used, loft achieved by slowly cooling dyebath at end of dyeing.

Package Dyeing. Wind very soft package on springs or tubes, avoid

Roller Printing of Dynel Fabrics Possible

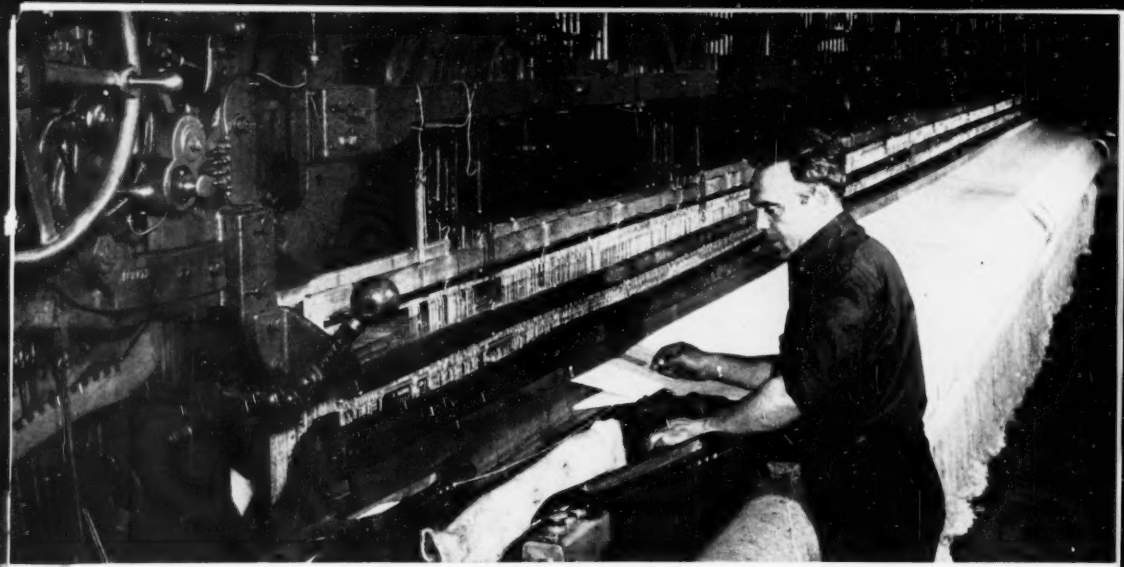
Successful roller printing of 100% dynel fabrics is now possible on a commercial basis, according to Decora Corporation of New York City. Dynel fabrics printed by a new technique are reported to have excellent fastness to washing and crocking and to retain the soft hand of the original cloth.

The method of production is said to take advantage of experience with vinyl films. A full range of bright colors is available, including blacks, whites, pastels, and deep shades.

Exact control of the temperature for curing the ink is an important factor in the production of soft printed goods, the announcement stated. Slight harshening of the fabric can generally be removed by a simple scouring.

An unforseen advantage of the printed fabrics is said to be their high resistance to sunlight. Fade-O-Meter tests indicate that the printed areas have a light fastness of 80 hours or more, so that good overall sun fastness is achieved by printing fabrics with a light background color over the entire surface and then surprinting the design in the desired colors.

Printed fabrics show no bleeding or fading after repeated 45-minute washings at 160 F, it is claimed. Since the printed goods are also highly resistant to crocking, this new printing process appears to offer good qualities for use in upholstery, in coverlets, and in slip covers. Since the dried vinyl resin ink is in itself nonflammable and certain dynel fabrics have already been approved as fire resistive for use in public places, it is expected that the printed fabrics can be used for draperies in places of public assembly, on aircraft, and shipboard.



Switching to Sunotex Machine Oil solved a troublesome staining problem for this manufacturer of papermaker's felts. Its superior adhesiveness keeps it on moving loom parts three times as long as the "adhesive" oil it replaced. Such slight spotting of felts as may occur is easily removed because of the complete scourability of Sunotex Machine Oil. Because of its fine performance, Sunotex Machine Oil is now used on every loom in this mill, including the 500-incher shown above.

THESE "JOB PROVED" SUN PRODUCTS IMPROVE QUALITY, HELP CUT COSTS

A mill making synthetic fabrics credits Sunotex RSO-48 for much of its reputation for product quality. Replacing an emulsifiable oil, a penetrant and a preservative, Sunotex RSO-48 improved warp-sizing uniformity; reduced "snowballing" of filaments during weaving; and cut formula costs 25%.

When a Sun representative recommends a lubricant or process aid, he does so with confidence. Every product developed in Sun's laboratories is exhaustively tested by actual use in industry until desired performance characteristics have been clearly established. Only then is it rated "Job Proved" and offered for sale.

In tackling your problems, a Sun representative draws on the wealth of experience he has acquired working in all fields of industry. And if the technical nature of your problem calls for it, one of a special group of Sun mechanical and chemical engineers will go to work in your behalf. Back of them, remember, are the vast research, development and refining facilities of Sun Oil Company. All of this is your assurance that Sun products will help you improve your quality and cut maintenance costs.

For the services of a Sun representative, call or write the nearest Sun Oil Company Office.

SUNOTEX TEXTILE-PROCESS AIDS

WOOL

SUNOTEX WO-220—Excellent for processing worsteds. "Tops" treated with it will not discolor during storage. It is readily scoured from the wool, leaving it in perfect condition for dyeing, even in the lightest pastels.

SUNOTEX WO-410 and WO-420—Both designed for worsteds and high-grade woolens. WO-410, with its lower viscosity, gives greater softness to knitting and blanket yarns. WO-420 has a higher viscosity and is used to overcome possible excessive friction during weaving.

SUNOTEX RSO-48 and RSO-321—Have high anti-static properties, are ideal for use where humidification is not available. RSO-48 is used in processing knitting and blanket yarns; RSO-321 for weaving yarns.

SUNOTEX TS-48—Ideal for processing dyed wool stock and yarns. Although it can be scoured easily from fabrics, small quantities are often permitted to remain in overcoating, blankets, carpets, etc., because it does not stain or develop objectionable odors.

SUNOTEX RWO-420—Recommended where surface lubrication of wool is essential . . . the ideal substitute for lard oil. Adapted for use in spinning suitings, blankets, carpets, felts, and wherever wool blends are used. Retains its outstanding scourability properties for long periods.

SUNOTEX TSO-615—An inexpensive product for lower-quality wool blends and blends of reworked wool. Has sufficient body to protect fibers during picking. Eliminates fly and static problems.

SYNTHETICS

SUNOTEX RWO-48—A softener and plasticizer for gelatin and other binders in sizing of viscose and acetate rayon warps. It provides excellent penetration of size, uniform sizing, and smoother sizing surfaces on the threads, thus minimizing "snowballs" during weaving.

SUNOTEX RSO-48—Contains all the advantages of RWO-48 but with an added anti-static agent. Well suited for processing nylon and for similar applications where static is a problem.

SUNOTEX TS-48—Recommended as a trough oil on full-fashioned hosiery knitting machines. Also a versatile, all-purpose fiber lubricant for processing viscose, acetate, nylon, cordage and mercerized cotton.

SUNOCO FIBRLUB L-220—A nonemulsifiable coning oil used in the throwing of nylon for full-fashioned hosiery. Provides protection by lubricating the sized thread, reduces "roll," increases snag resistance, prevents corrosion, and produces a more uniform stitch formation.

COTTON

538 COTTON CONDITIONER—Small amounts of this product are sufficient to "lay the fly." Its use results in a cleaner mill, better health of employees, and increased yield of cotton.

ASBESTOS

ASBESTOS FIBER CONDITIONER—Sprayed on asbestos during processing to keep fiber from being damaged or broken. Harmful dust is minimized when this product is used.

CORDAGE

CORDAGE OILS—Keep cordage and binder twine pliable over a long period of time. Stay put . . . don't squeeze out. Easily blended with additives.

TEXTILE MILL LUBRICANTS

SUNOTEX MACHINE OIL No. 350—One lubricant for nearly every type of textile machine. A high-quality mineral oil compounded to prevent rust, cling to moving parts, and minimize wear. Scours out of all kinds of fabrics easily and completely, leaving no discoloration.

A wool processor increased his yield 3 percent when he changed to a Sun Textile-Process Aid. It improved the quality of his finished product, speeded production by saving preparation time and penetrating the wool fibers quickly and thoroughly.

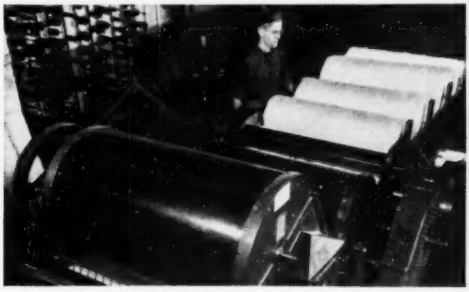
SUNOTEX MACHINE OIL LIGHT No. 150—A lubricant with the same properties as Sunotex Machine Oil No. 350, but lighter in viscosity. For needles, sinkers and related parts of knitting machines.

SUNVIS 900 OILS—Unexcelled for spindles; available in viscosities for most speeds and designs. Also for turbines, for use as a hydraulic medium, and for circulating systems requiring longest possible oil life. Because of their stability, Sunvis 900 Oils often outlast the equipment in which they're used.

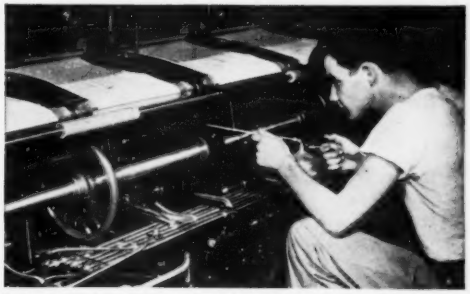
SUNTAC OILS—Recommended for general lubrication of bearings, gears, chains, cables, couplings and linkages to eliminate "throw-off." Also for hydraulic systems of old equipment where leakage is a problem. Compounded to be adhesive, Suntac Oils cling to bearing surfaces and supply constant, superior lubrication.

SUN ADHESIVE PRESSURE GREASES—For chains, slides, cams, sprockets, open gears, cables, couplings, linkages, etc., where "throw-off" with resultant wear and spotting must be avoided. Applied without preheating.

SUN ROLLER BEARING GREASES—For ball or roller bearings in electric motors, generators, and machinery operating at normal or high temperatures.



A cotton fabric manufacturer ended corrosion troubles by switching to a Sun Textile-Process Aid. At the same time he improved the quality of the fabrics, speeded up production, and widened his profit margin. In oil costs alone, he now saves about $1,000 a year.



Production of perfect nylons in this mill had been greatly reduced by oils which permitted rust to interfere with the precision-adjusted mechanisms of the machinery. A switch to Sunotex Machine Oil ended the problem and restored production to rated capacity.

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abrasion by alignment on winder, crimp package shoulders, handle carefully when placing on dye spindles. Thermoplastic qualities permit shaping of package at 205-10 F, but pump must not be stopped or packages may shift and liquor will bypass. For sampling or stopping pump for any reason, cool bath slowly to 175-80 F; same at end of cycle. At end of dyeing, circulate from inside to outside to aid later winding. Sodium sulfate (when permissible) in dyebath or as separate operation to reluster is essential.

Hosiery Dyeing. Most is piece dyed with acetate dye in loose state or nets of cotton or "Orlon"; copper inadvisable when elastic is in dyebath. In paddle or rotary machine, disperse dye in warm water, add to machine partly filled with hot water to disperse further, bring to proper water level, add goods dry. Raise to 205-10 F, dye 30 minutes, then add 60-80% sodium sulfate, continue 60 minutes or until get correct shade.

Important to cool hot dyebaths at end of dyeing. Avoid crow's feet by letting hosiery float freely during dyeing and while cooling to 120 F.

Seldom scour light shades; dark shades scoured with soap or anionic detergent; for exceptional wash fastness, use second scour at 160 F with sodium hydrosulfite and soda ash. Apply antistatic finish after scouring.

Boarding. Done on internally heated forms after air drying. Steam pressure 5 or 6 pounds. Use continuous boarding machines at 215 F.

Health and Welfare Plans for "White-Collar" Employees

In General Salary Order 11, the Office of Salary Stabilization recently added a fifth condition under which it will permit a health and welfare plan to be put into effect without prior OSS approval for employees under its jurisdiction. The OSS formerly had released its policy on this subject, setting forth four conditions under any one of which such a plan could be effectuated.

The fifth, or new, condition has been included with issuance of GSO 11. According to the National Association of Hosiery Manufacturers, this condition allows use of a plan if employees covered by the plan pay at least 40 per cent of the gross cost of health and welfare benefits, provided the plan does not include benefits for employee dependents.

The five conditions of the plan, all of which now are included in GSO 11, are as follows:

(a) If it covers employees subject to the jurisdiction of both the Wage Stabilization Board and the Salary Stabilization Board upon the same or similar terms and (1) meets the requirements of General Wage Regulation No. 19 and of Wage Stabilization Board Resolution No. 78, or (2) is approved by the Wage Stabilization Board for employees under its jurisdiction; or

(b) If the employees covered by the plan pay at least 40 per cent of the gross cost of the health and welfare benefits, provided that the plan does not include benefits for employee dependents; or

(c) If it is an extension of an existing plan to additional employees within the same plant or establishment, or from a group of employees in one geographical unit of a multi-plant employer to a similar group of employees in another geographical unit of the same employer; or

(d) If it is an extension or renewal of a plan in effect on January 25, 1951, or approved by the Wage Stabilization Board prior to May 19, 1951, or by the Office of Salary Stabilization thereafter; or

(e) If it is a new or amended plan required by law.

Such health and welfare plans would be for the purpose of providing for disability, hospital expense, surgical expense or in-hospital medical expense, group life insurance, including permanent and total disability benefits, or accidental death and dismemberment benefits.

Moisture Regain of Nylon Discussed in Du Pont Bulletin

The moisture regain of nylon fiber at 65% relative humidity and room temperature is considerably less than that of wool, viscose rayon, silk, mercerized cotton, cotton, linen, and acetate rayon, but greater than that of "Orlon" and "Dacron," according to a recent bulletin from the Textile Fibers Department of E. I. du Pont de Nemours & Co., Inc.

Nylon fibers undergo changes in length with changes in moisture content, the bulletin stated, increasing in length with increase in moisture content and decreasing in length when moisture content is reduced.

Only a slight change in the diameter of nylon fibers occurs when moisture content is changed.

The company reports that the rate at which nylon yarn will pick up moisture from the air is largely dependent upon the type of package on which it is wound, particularly the density of the package.

Because of the low moisture regain of nylon, it is more susceptible to static electricity. Consequently, in processing nylon it is usually advisable to maintain the relative humidity in the storage and processing rooms at as high a level as is consistent with good performance. Sized yarn may have a lower ceiling of relative humidity for good performance than unsized yarn because of the effect of moisture on the size, the bulletin indicated.

Twenty-one technical papers presented at the

Third Cotton Research Clinic

Staff Report

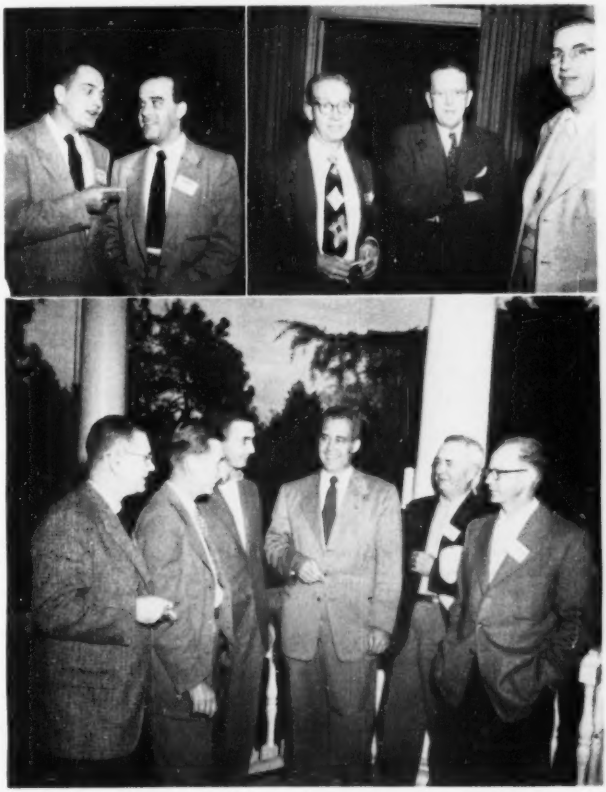
MEN INTERESTED in cotton research attended the 1952 Cotton Research Clinic at the Carolina Hotel, in Pinehurst, N. C., on Feb. 13-14-15; it is sponsored by the Fiber and Processing Section of the National Cotton Council, which brought together, this year, twenty-one speakers to present papers on various aspects of cotton research.

The value of these clinics can be demonstrated by a glance at the programs of last year and this. Last year a paper was presented by the Southern Regional Research Laboratory which described the SRRL Lint Cotton Opener. Another paper, on increased production from cards, as the result of higher licker-in speeds, was presented by John Bogdan, of N. C. State College. This year, the same subjects were covered in one paper presented, not by a member of a research team, but by the superintendent of a mill (E. A. Bentley, Swift Manufacturing Company, Columbus, Ga.) where the equipment and the processes described at last year's clinic had been mill tested on a large scale and proved practical.

Five sessions, with an average of four papers to a session, left only the last afternoon of the three days open. It was a full schedule, but one that was of undoubted value to all who attended.

Fiber Characteristics. The first session of the Clinic heard papers dealing largely with cotton breeding and fiber characteristics, properties over which the mill has little control but which definitely affect the mill processing.

J. Lindsay Dexter, Pepperell Manufacturing Company, Boston, Mass., was chairman of the session, and the first paper, prepared by C. Hoyt Rogers and J. Winston Neely, of Coker's Pedigreed Seed Company, discussed "Problems in Breeding New Cottons." This paper described the processes used by plant breeders in developing improved varieties of cotton. Breeders, the speaker pointed out, are now not only interested in the



MILL MEN, research men, and supplier technicians attended the Clinic. In these photos are: Upper left—**G. Dent Mangum, Jr.,** and **C. E. Commins** of the National Cotton Council; upper right—**J. B. Crowe** and **E. M. Kelly** of Proctor & Gamble; **M. Earl Heard** of West Point Mfg. Co. Below—**Dr. J. L. Vaughn** and **T. W. L. Bailey** of the Institute of Textile Technology; **H. F. Hunsucker, Jr.,** Highland Cotton Mills; **James E. Dougherty** of ITT; **R. G. Honeycutt,** Clinchfield Mfg. Co.; and **C. Frank Goldsmith** of Cross Cotton Mills.

Digest of Bentley's Report on SRRL Opener at Swift

(An example of the practical application of research is shown in the accompanying digest of a report on the Southern Regional Research Laboratory type cotton opener at Swift Manufacturing Company, Columbus, Ga., by Allen Bentley, superintendent. Mr. Bentley heard the opener described at the 1951 Cotton Research Clinic [see TI May 1951, pages 107-111], subsequently installed one, now has three. The cycle: development by research men, publication of findings, experimentation by mill men, installation on a production basis. The units at Swift were manufactured by Cen-Tennial Cotton Gin Company of Columbus, Ga.)

Machinery Layout. Ten blending feeders drop cotton on a feed table, 7 ft Gyrator section, into SRRL opener. Stock splits into parallel lines of cleaning, each consisting of No. 11 condenser, No. 12 opener, No. 11 condenser, No. 12 opener, Superior cleaner, then to picker room or to baling press (for raw stock dyeing). Total production through SRRL opener, 2200 lb cotton per hour. Three mixes run: SGO and part waste, LM, and SLM.

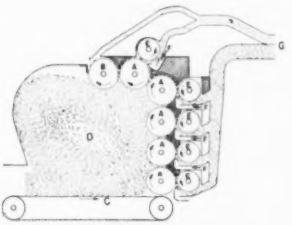
Opener speed 425 rpm on saw cylinder, 930 rpm on doffer or licker-in cylinder. Total pounds run at time of report, 6,500,000.

One of the first results noticed was the immense amount of leaf and trash which fell out at the opener during processing; trash contained no fiber at all, but was the lowest possible grade of leaf, stalk, and other foreign matter. This was unexpected.

The SRRL opener was discovered to be an excellent blender due to the rapid whirling of the cotton inside the enclosure and to the multiple delivery points.

Results. Overall waste percentage was 3.07 with the SRRL opener and 3.09 without it; although little difference, the quality of the waste was much lower on the stock processed through the opener.

Shirley analyzer tests showed that cotton as received in the bale and processed through the opener contained 91.8% lint fiber; that received in the bale and processed without opener contained 92.8% lint fiber, or one per cent additional lint before any processing. Shirley analyzer tests on waste removed by two No. 12s and Superior indicated there was 5.2% less fiber lost (25% reduction in lint fiber waste) in the motes and one-tenth of one per cent less cage loss on the cotton when processed through the SRRL opener, as compared to stock that did not pass through the opener.



Operation of SRRL Opener: **A** toothed cylinders; **B** kicker cylinders; **C** conveyor belt for feeding stock; **D** cotton; **E** doffer cylinders; **F** air suction; **G** duct to deliver cotton to next process. For complete description of operation, see TI May 1951, page 107 (reprints available).

A further check by the Shirley analyzer on stock delivered from the front of the cleaning line showed that the percentage trash left in the cotton after going through the opener and the cleaning line was 3.87, and when not passing through opener 4.93.

Picker waste, 2.21% with opener, 2.64% without. Picker motes showed 14.6% lint cotton and 1.8% cage loss with 83.6% trash, with opener; without opener, 17.6% lint fiber, 80.0% trash, and 2.4% cage loss. Shirley analyzer test at the front of the picker showed 98.4% lint with opener, and 95.4% without.

At cards, waste percentage (not counting strips) 2.62% with SRRL opener and 2.83% without. Invisible waste 1.84% with opener, 2.16% without. Neps with opener (at cards) 21.5%; without 20.9%.

Breaking strength (skein), 8s yarn: without opener 207 lb, with opener 218 lb. Tens yarn through opener, 175 lb, without 164 lb. (Average of 5% increase in breaking strength with opener.)

Summary of Results. Overall percentage of waste was reduced .98%, lint fiber in the waste removed was reduced 22%, breaking strength of yarn was increased 5%, and the neps were, to all practical purposes, the same.

Quality of the yarn as grade was raised approximately half, or from minus to plus grade on the lower quality cottons.

There is much more to be learned from the machine, and future tests will be to eliminate some beating from the lines to determine just where the maximum value will be reached.

(Note: In addition to opening layout previously described, stock was processed as follows: pickers, 400 lb per hour; cards, production ranging from 8 to 25 lb per hour; two-process ball bearing drawing; single-process roving, .70 hank to 3.20 hank; spun single roving in spinning for 8s, 10s, and 16s; double for 18s and 24s.

(After installing the SRRL opener, it was necessary to change the settings on the grid bars on the No. 12 openers—adjusted to ¾" from beater to grid bars; grid bar opening at top set at ½"; grid bar opening at bottom 3/16".

(On pickers, closed the grid bars to 3/16" opening and the grid bars were brought to ¾" on the breaker and intermediate beater sections, but to ⅝" on the finisher section. Foregoing was done to prevent excessive lint from falling out after the improved opening with SRRL opener.)

agricultural aspects of cotton improvement but are also concentrating on the physical properties of the fibers and the mill performance. The work of the breeders in this improvement of cotton from the mill's point of view has and will pay off in cottons which run better and make a better cloth.

The next paper took up "Superior Mill Processing Characteristics of Certain New Cotton Varieties," as noted by Thomas Kerr, of the Plant Industry Station, at Beltsville, Md. Mr. Kerr explained the continued tests on Hoppi Acala cottons, which are directed toward the improvement of drape and luster as well as strength. In the discussion following Mr. Kerr's paper, it was sug-

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BUT how does it compare with the Cullinan? ... In everything we do, we make comparisons . . . In Full-Fashioned Knitting, the one standard for comparison is the 30-section "Reading" Machine with a production of 14 to 16 dozen pairs of superior quality stockings in 8 hours. 51-gauge, 60-gauge.

TEXTILE MACHINE WORKS • READING, PENNA.

gested that it may be necessary and wise to breed different cottons for different end uses instead of continuing to concentrate on cotton of high strength and maturity.

The synthetic people, it was said, produce a product and then find a use for it. Perhaps cotton might profit by their example and breed some cottons for high luster or some other characteristic of importance to the consumer in specific end uses, disregarding, for that type, the characteristics of high strength or spinnability.

Dr. Lyman Fourt, of Harris Research Laboratories, Washington, D. C., then read a paper describing his continued activities in determining a method for predicting cotton luster from a measurement of X-ray angle. Dr. Fourt has found that for the 1950 crop, the American Egyptian group is outstanding for luster, with Sea Island next, followed by the Upland groups. Within the Upland groups, high luster tends to correlate with greater length, and greater strength and with lower X-ray angle, specific surface, and immaturity value D.

Dr. Henry Barker, of the Beltsville, Maryland, Plant Industry Station, discussed "Relationship Between Cotton Variety and Mercerizing Characteristics." He said that tests have been made which indicate that there is a relationship between the amount of strength a type of cotton gains in mercerization and the X-ray angle of that cotton. This X-ray angle is the same factor being investigated by Dr. Fourt in his studies of luster. According to Dr. Barker, it would seem that the greater yarn strength gains after mercerization are made by those fibers which reflect the lower X-ray angles.

Dent Mangum, of the National Cotton Council, then gave the results of his studies of tar spots. This report was carried in its entirety in the March issue of TEXTILE INDUSTRIES, and preprints of it were made available to everyone at the Clinic.

Cotton Fiber Tests. During the afternoon session of the first day, R. H. Tuttle, of Fieldcrest Mills, Spray, N. C., acted as chairman.

'Socialism Wears More Than One Disguise'

The program being enacted into law in America today has been described by Warner Electric Brake & Clutch Co. as "not essentially different" from the Karl Marx program of Socialism. "It is hard to pick up a newspaper today and not find that the government has gone into a new field of business or economic activity directly competitive with the rights of the individual American," a company spokesman said.

Believing that the nation's travels in the footsteps of Marx can be halted only when more people understand that we must fight Socialism in whatever form it appears, the brake and clutch manufacturer distributed a pamphlet designed to lead to such an understanding.

The pamphlet points out that in 1848 Karl Marx, in the "Communist Manifesto," outlined the steps necessary for a socialized state. How Socialism wears more than one disguise is shown by listing eight of these steps and opposite them their counterparts from present U. S. programs, as follows:

From the Communist Manifesto—	From Present U. S. Programs—
1. Abolition of property in land and application of all rents of land to public purposes.	1. Public housing projects are being built, owned and operated by the federal government.
2. A heavy progressive or graduated income tax.	2. Federal taxes can take up to 88 per cent of personal income.
3. Abolition of all right of inheritance.	3. Under the highest tax rate, the government can confiscate 77 per cent of the value of an estate.
4. Centralization of credit in the hands of the state, by means of a national bank with state capital and an exclusive monopoly.	4. The federal government is in banking and financing with the Reconstruction Finance Corporation, the Federal land banks, the Federal Intermediate Credit Bank, and others.
5. Centralization of the means of communication and transport in the hands of the state.	5. Radio and television are tightly controlled by the government. So are the railroads, truck and air lines. Federal barge lines operate in competition with private carriers. Control of the press has been attempted recently.
6. Extension of factories and instruments of production owned by the state; the bringing into cultivation of waste lands, and the improvement of the soil generally in accordance with a common plan.	6. The government produces and sells electric power through the Tennessee Valley Authority and the Rural Electrification Administration. It also sponsors irrigation projects and rigid crop controls.
7. Combination of agriculture with manufacturing industries; gradual abolishment of the distinction between town and country by a more equable distribution of the population over the country.	7. Under guise of the defense effort, the "planners" want industry "dispersed" to rural areas.
8. Free education for all children in public schools.	8. Public schools have traditionally been organized and financed by individual states and cities. However, federal aid to education opens the door for eventual national domination of schools.

Not Sometimes-But Always

You can draw a winning poker hand sometimes, but you can always draw lucky numbers if you buy Ashworth Card Clothing. The lucky numbers are 4-6-7 and they stand for:—

4 FACTORIES (Fall River, Worcester, Philadelphia, Greenville) which assure you of an uninterrupted supply of card clothing. Decentralized and strategically located, these factories can "pinch hit" for each other in emergencies.

6 REPAIR SHOPS (Fall River, Philadelphia, Charlotte, Greenville, Atlanta, Dallas [Textile Supply Co.]), which assure convenient, economical and prompt reclothing and repair service.

7 DISTRIBUTING POINTS (Fall River, Worcester, Philadelphia, Charlotte, Greenville, Atlanta, Dallas [Textile Supply Co.]), which make Ashworth products and consultation service more readily available.

AND DON'T FORGET "90". More than 90 years of experience in cards and card clothing — your guide to a consistently high standard of quality in manufacture and efficiency in performance.

Buy Ashworth Card Clothing and be lucky ALWAYS.

PRODUCTS AND SERVICES . . . Card Clothing for cotton, wool, worsted, silk, rayon and asbestos cards and for all types of napping machinery. Brusher clothing and card clothing for special purposes. Lickerin wire and garnet wire. Sole distributors for Platt's metallic wire. Lickerins and top flats reclothed.

ASHWORTH BROS., INC.
AMERICAN CARD CLOTHING CO. (Woolen Division)
Fall River • Worcester • Philadelphia • Charlotte • Greenville
Atlanta • Dallas (Textile Supply Co.)

Ashworth **CARD CLOTHING**

and four papers were presented which dealt with the applications and limitations of cotton fiber tests.

William J. Martin, of the U. S. Dept. of Agriculture, stated that there is a considerable increase in the number of mills making fiber tests. Of the mills surveyed, about two-thirds are making fineness tests. More than half of the mills are testing for maturity, and there is an increase in the number making tests for fiber strength. These tests supplement data on grade and staple, and help determine that quality formerly known only as "character."

Otto Goedecke, of Otto Goedecke, Inc., Hallettsville, Texas, discussed the testing problem from the point of view of the cotton merchant, and he expressed the opinion that much value has come to the mills as a result of testing done by the merchant, but he also pointed out that there was still much to be done. He feels that additional research is necessary to make the Fibrograph a more effective instrument, and much more work is needed in developing test methods for determining maturity.

This discussion of physical testing was continued by G. W. Pfeiffenberger, of Chicopee Manufacturing Co., Chicopee Falls, Mass., and Dr. Harry A. Mereness, of ITT, in Charlottesville, Virginia. Mr. Pfeiffenberger accented the problems encountered in the application of fiber and spinning data in large scale mill operations, while the Mereness paper spoke of the utility of fiber tests in aiding mill processing. Dr. Mereness also suggested a number of research projects, principally on mill performance, which the Cotton Council might sponsor.

Chemistry and Cotton. On the second morning the chemists took over; V. B. Holland, of Cannon Mills Co., Kannapolis, N. C., was chairman of the session. M. J. Scott and J. W. Harrison, both of Monsanto Chemical Co.'s Research Department, presented two papers on "Application of Colloidal Silica to Cotton." This material has been used for several years in the processing of wool, to add strength in processing through the increase in fiber friction. Only recently has it been investigated for cotton.

The chief drawback to successful use of silica comes from the fact that it must be applied to the cotton evenly and apparently must be applied as a liquid solution. Since most cotton is not wetted at any time during processing, the application of silica is a problem. In the research laboratory it is possible to immerse card sliver or raw stock and get good results, but neither of these methods is practical in most mills.

However, silica is being used on cotton at Standard-Coosa-Thatcher Co., in Chattanooga, Tenn., and Aubrey A. Hobbs, superintendent of the Thatcher plant, told a little of their methods. They spray the colloidal silica on the raw stock and manage to get even distribution. They have found that when evenly distributed, silica is a major aid in drawing and spinning.

At this point, C. E. Gruen, of Shell Oil Co., gave an unscheduled report on a new Shell product, Celconus A, a new oxidation resisting oil for treatment of cotton before mill processing. This oil has not been mill tested in this country, but tests in the United Kingdom indicate the following results when the oil is applied with a special spray at the picker: 50-80% reduction in fly and dust; easier cleaning of equipment; metal surfaces of processing equipment shine and resist rust; compact waste; wax marks removed from machinery; better control in drafting; improved spinning efficiency; less variation; and reduced static.

(*Continued on page 235*)

No Evidence to Support "Internal Solution" Theory of Dyeing

At a recent meeting of the Textile Research Institute dyeing research advisory committee, Dr. Howard J. White, Jr., staff scientist, reported that no evidence has been found to support the "internal solution" theory of dyeing. The simplest absorption model which qualitatively fits Dr. White's experimental data is one of absorption onto strong bonding sites throughout the fiber with competition between various components of the dye bath for these sites.

From a theoretical standpoint, the model proposed by Gilbert and Rideal comes closest to fitting the experimental facts although it fails to predict all data quantitatively. The experimental data suggest that a variety of absorption sites should be considered rather than one type only and that some consideration should be given to the fact that the fiber is swollen during the dyeing process. Dr. White stated, however, that much more experimental and theoretical work must be done before the electrostatic interactions which occur within a fiber are completely understood.

D. L. Underwood, research fellow, reported the development of a device for the remote handling of weighing bottles at constant temperature and relative humidity. In previous experiments utilizing radioactive isotopes the rate and amount of absorption of all components of a dye bath with the exception of water have been measured simultaneously. The remote handling device used in connection with other newly developed experimental techniques now enables Dr. White's group to measure the uptake by a fiber of all components of the dye bath, including the water, and to observe the competition of the various dye bath components for sites within the fiber.

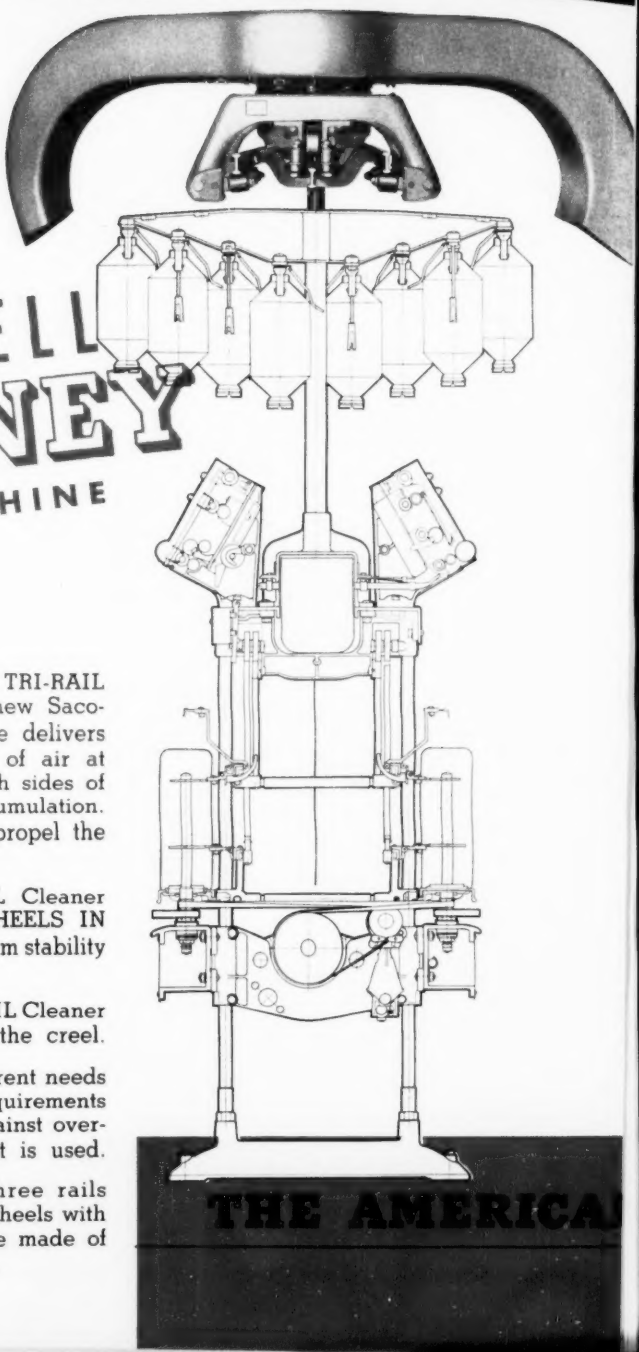
Report was also made of experimental dyeing of acetate from benzene solutions. Equilibrium absorption data have been obtained at two temperatures of dyeing. Further work will be carried out on the application of Langmuir's isotherm and on the determination of the heat of absorption.

THE *NEW* AMERICAN TRI-RAIL

especially designed for the

NEW

SACO-LOWELL GWALTNEY SPINNING MACHINE



ADVANTAGES

FUNCTIONAL DESIGN— The New TRI-RAIL Cleaner especially designed for the new Saco-Lowell GWALTNEY Spinning Machine delivers pre-controlled and varying velocities of air at regular intervals down and across both sides of spinning machines to prevent lint accumulation. Separate motors for cleaning and to propel the cleaner assure maximum efficiency.

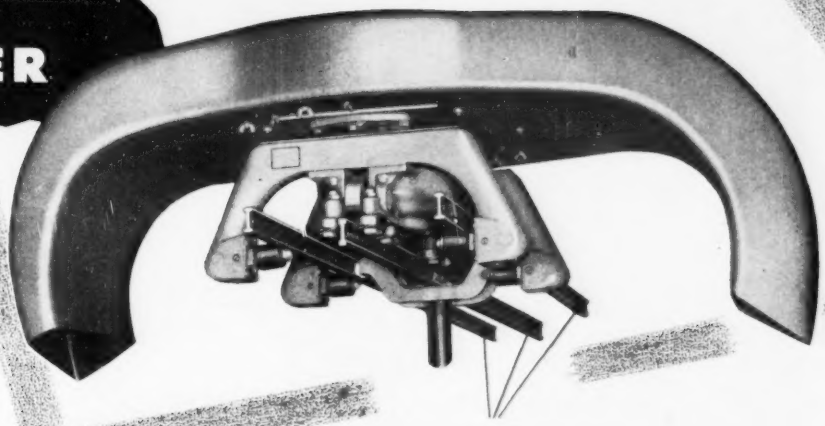
IN-LINE DRIVE— The New TRI-RAIL Cleaner travels on the center rail — ALL WHEELS IN LINE — The outside rails maintain uniform stability of travel.

LOW HEADROOM— The New TRI-RAIL Cleaner can operate within 15 inches above the creel.

SAFETY FEATURES— Low 55 volt current needs no shielding and meets insurance requirements for safety. All motors are protected against overload. No delicate electrical equipment is used.

RUGGED CONSTRUCTION— The three rails are of high carbon-manganese steel. Wheels with precision bearings and side rollers are made of special alloy heat-treated for long life.

CLEANER



STABILIZED TRAVEL

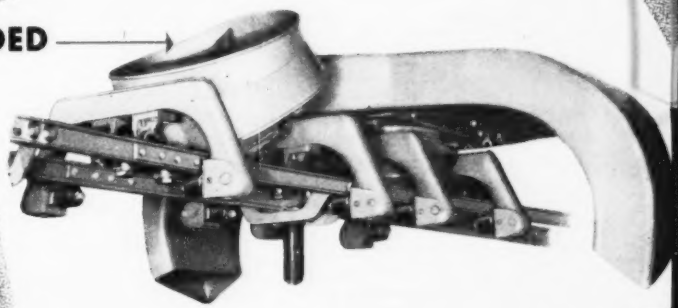
Three rails assure uniform stability of travel for the New TRI-RAIL Cleaner even around curves of short (2 foot) radius.

MONORAIL SUSPENSION

Where needed, this new creel mounted cleaner can be easily adapted to operate on monorail track suspended from the ceiling similar to the well known American MonoRail Swirling Column Cleaners.

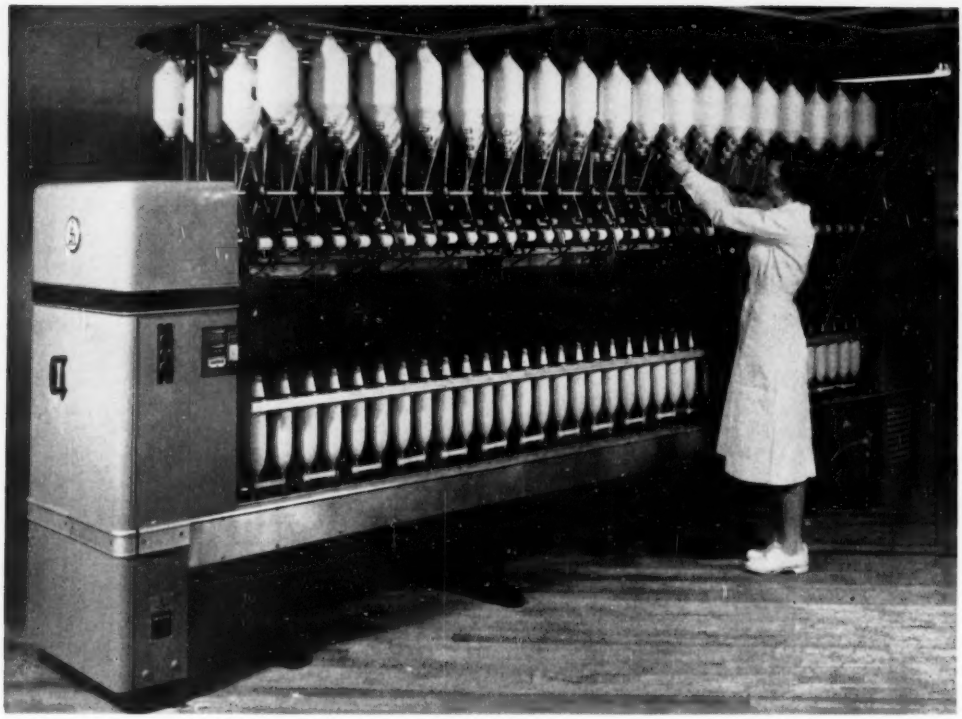
CEILING CLEANER ADDED →

A powerful airfoil propeller fan can easily be added to the New TRI-RAIL Cleaner to send a high velocity column of air upward against the ceiling to eliminate accumulation.



MONORAIL COMPANY

13108 ATHENS AVENUE • CLEVELAND 7, OHIO



Saco - Lowell Gwaltney Spinning Frame

SACO-LOWELL Shops have announced and made available information on the new Saco-Lowell Gwaltney spinning frame, developed by the late Eugene C. Gwaltney. Yarn of improved quality can be spun on the frame at lower cost, it is said.

Outstanding features of the new frame are the larger package, control of yarn balloon and tension while forming the package, higher traveler speed, stronger yarns with less twist, interchangeable gearing, redesigned drafting element, anti-friction bearings, and the pneumatic broken end collector as an integral part of the equipment.

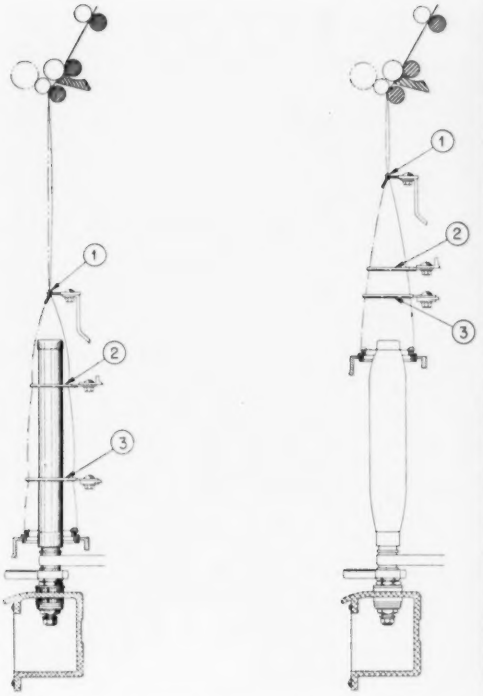
The accompanying photographs adequately illustrate the design and principle of operation. Technical details, furnished by Saco-Lowell, on the new frame follow:

Package Forming Mechanism. The front rolls are located 27½" above the ringrail when the ringrail is at the bottom position. At this distance a node or neck-shaped balloon would occur if the node were not suppressed and the balloon converted to a different shape. This is accomplished by three rings of different sizes which traverse in a suitable manner (see facing page for illustrations and details).

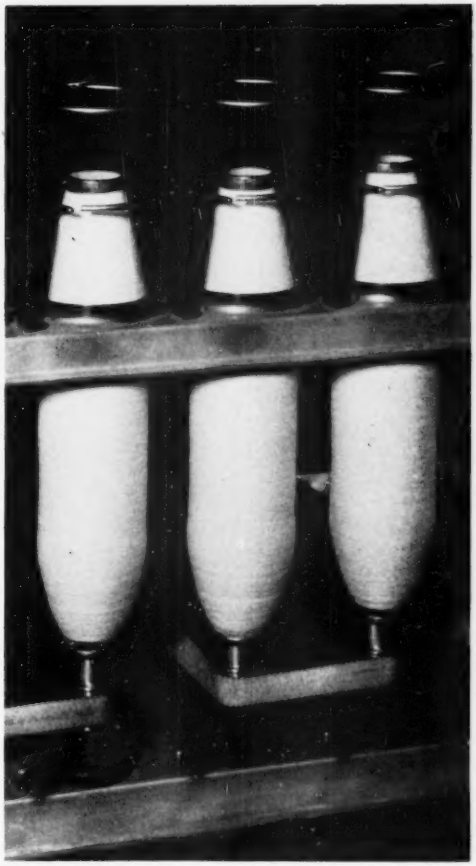
The equipment has been undergoing mill tests, and Saco-Lowell advises that extremely large packages can be produced under economically practical operating conditions, with fewer ends down, even in low twist operations.

Effects of Tension Control. Tension in the spinning thread is low and the variation of tension during the doff is low. A single gauge of frame is thought to be commercially economical for a wide range of counts, permitting rapid conversion from fine to coarse numbers.

The arrangement of the yarn control and tension permits the use of the longer traverse, therefore the longer and larger package. Tension control is said to permit traveler weights to be selected



IN MAKING LARGE PACKAGE the balloon of yarn from front rolls to the bobbin is controlled by movable rings which engage the yarn at various levels. **Ring 1** is a small diameter pigtail; **Ring 2** is nearly as large as the spinning ring; and **Ring 3** is slightly larger than the spinning ring. The spinning ring is traversed a distance of 11¼", and **Rings 1** and **2** move, together, a distance less than the spinning ring. **Ring 3** moves through the same traverse as the spinning ring. Sketches show two positions of rings and ringrail.



RINGS AND RINGRAIL are pictured. Note spindle brake.

with greater accuracy to suit the yarn size, and according to the company it now appears possible to run the traveler up to 50% faster and to extend the useful life of the traveler substantially.

Ring Sizes. Larger ring sizes may also be successfully used, and it is said that seemingly only two ring sizes will be required to run the majority of yarn counts now spun commercially in this country (3" ring now indicated by present experiences for medium or coarse yarns and 2¾" ring for medium through fine yarns—for very fine yarns a 2½" ring may prove desirable).

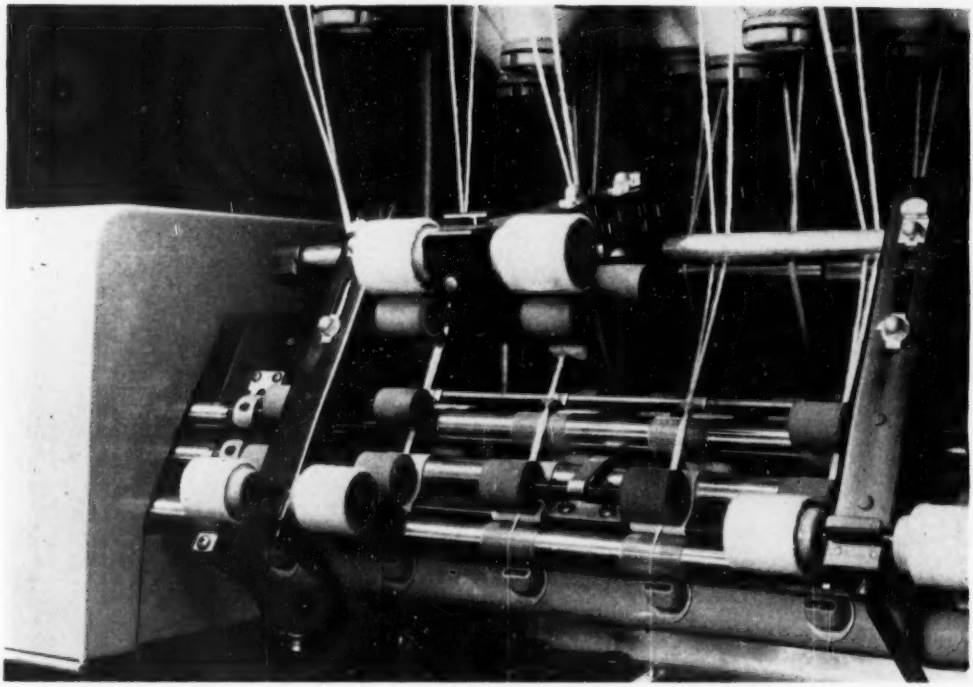
The company's experience with the new frame has indicated that under average operating conditions there will be a significant reduction in the number of ends down per thousand spindle hours.

Quality yarn is emphasized. Filling yarns and knitting yarns with low twist may be produced on the frame without difficulty, it is said.

Rewound Filling. In addition to lengthening the doffing cycle in spinning on the large package, the size of the package makes the rewinding of filling economically practical, reducing costs in winding because of fewer knots and less waste from tailings and other spooler or winding waste.

Other Construction Features. With larger rings it was necessary to build a frame of wider gauge, so to compensate for the extra floor space the frame is made narrower. It is also adaptable to air cleaning, self-lubrication, and other labor saving devices, such as the automatic broken end collector and a different method of piecing-up ends. Advantage is taken of new methods of metal working, and the chassis eliminates obstructing parts under it. New metal alloys combine rigidity and strength with a minimum of weight.

Head end gearing is placed so there is adequate space for adjustments. All change and constant gears in the head end and in the draft gearing are of the same bore and have teeth of the same pitch and width, permitting only one set of gears to be used for change



DRAFTING ELEMENT of the new spinning frame. Bearings of both top and bottom rolls are anti-friction type. Pneumatic broken end collector is standard equipment on the spinning frame.

FIRST PRODUCTION MODELS of new frame in operation at Bates Mfg. Co., York Division, Saco, Me.

gears for draft, twist, and lay. This allows a smaller stock of gears.

Draft gearing for both sides of the frame is enclosed in the upper part of the head end, driven by silent chains. The upper portion of the head end may be lifted up at either side of the frame or removed entirely to expose all of the draft gearing. Doors are held shut by a magnetic lock.

Drafting Element. In the draft-element the steel rolls are mounted in anti-friction bearings on a die-cast roll stand pitched 60 degrees and positioned to deliver the yarn directly over the center of the spindle. Needle-bearing top rolls are permanently fastened to an arm, thereby eliminating cap bars. All bearings in the drafting element are self-lubricated.

The New Era spindle is standard equipment, and an internal cam-type brake is used for stopping the spindle when piecing-up. The frame has a new tape tension pulley and bracket, the pulley in anti-friction bearings. Tension on the tape is maintained by a pre-adjusted internal spring and plunger. Direction of the twist may be changed easily.

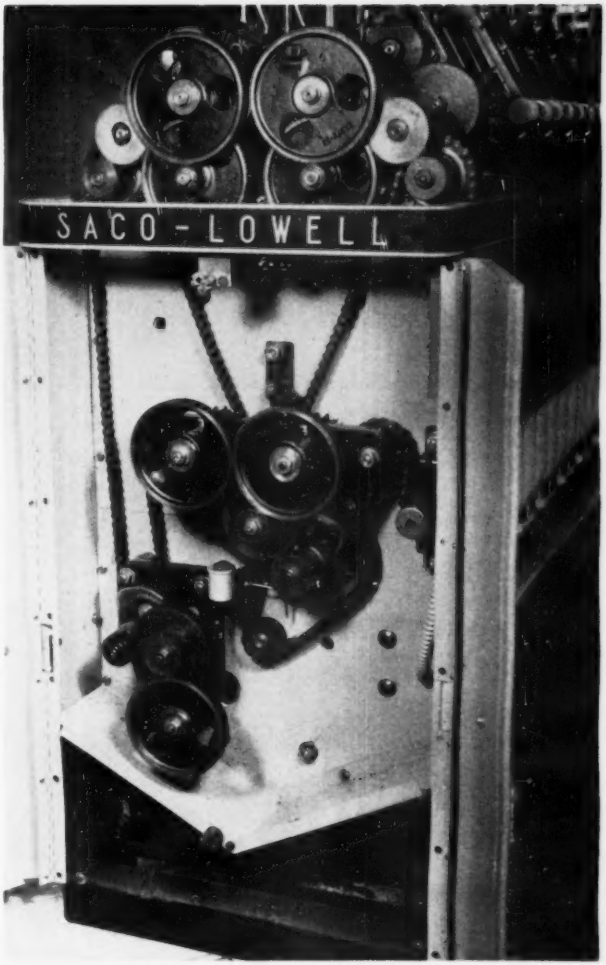
The water-cooled motor for driving is located under the frame near the front end. Water cooling the motor reduces the load on the air conditioning system. Drive is by V-belt.

A completely new builder motion adaptable to either warp or filling or combination wind controls the ringrail, anti-node rings, and thread guides.

The umbrella type creel is standard equipment.

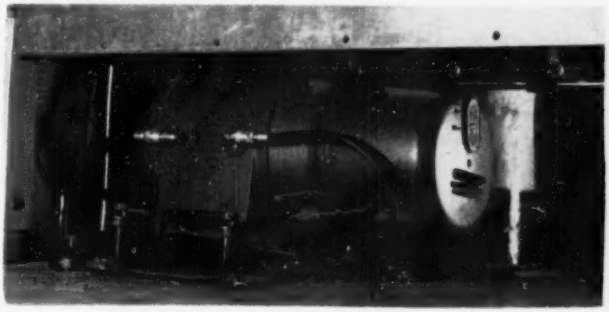
The head end and draft gears, cylinders, traverse motion, and builder are equipped with anti-friction bearings, and it is said that nothing on the frame requires lubrication more often than six-month intervals.

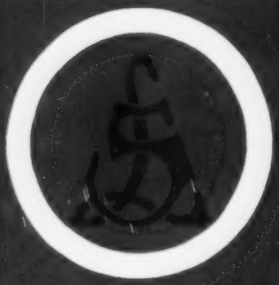
According to the company, spinners will be relieved of many routine jobs, such as picking and cleaning top rolls, cleaning scavenger rolls, picking flat clearers, wiping off roller beams and back boards, creeling-in and cleaning many small sized roving bobbins—and thus will be able to attend additional spindles.



HEAD END. All of the change and constant gears in the head end and draft gearing are of the same bore and have teeth of the same pitch and width, making them interchangeable and permitting a reduction in stock of gears.

WATER-COOLED DRIVING MOTOR under frame conserves space and aids in maintaining uniform atmospheric conditions in room.





Announcing the

SACO-LOWELL

GWALTNEY

SPINNING FRAME

The only revolutionary development in spinning for more than 100 years

ENGINEERED AND BUILT FOR 1952 COSTS BY...

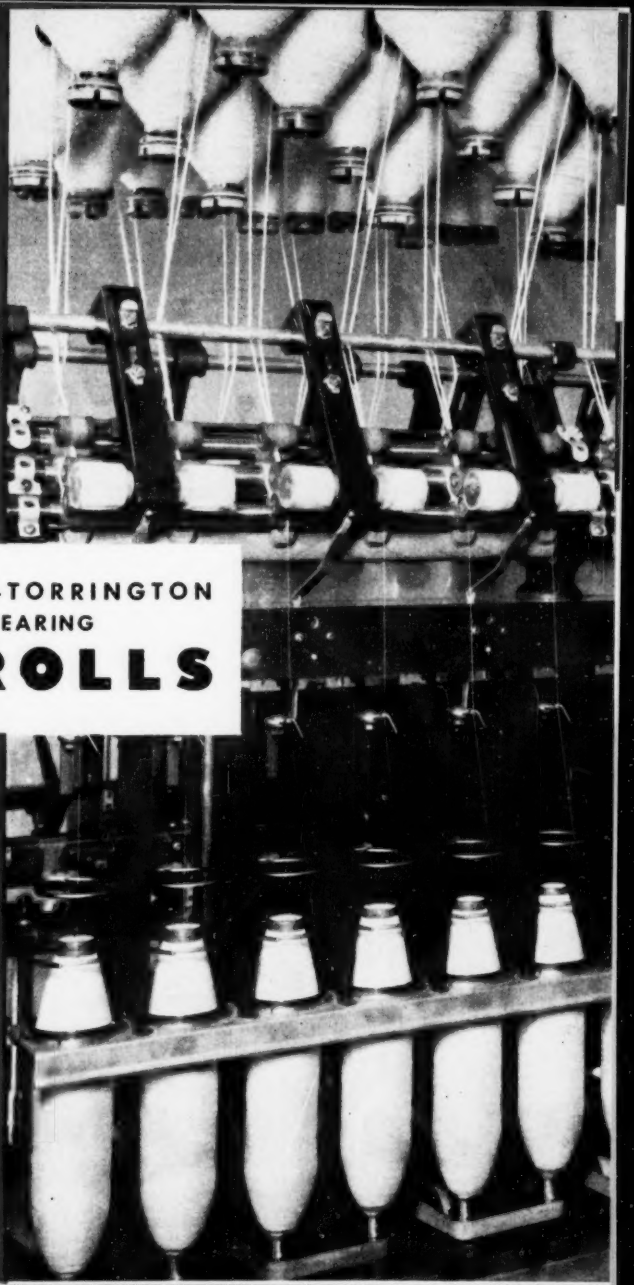
Part of the first installation of SACO-LOWELL GWALTNEY Spinning Frames. Photo taken January, 1952, at the York Division, Bates Manufacturing Co., Saco, Maine.

SACO-LOWELL

60 BATTERYMARCH STREET, BOSTON 10, MASS.

Shops at BIDDEFORD, MAINE and SANFORD, N. C.

SALES OFFICES CHARLOTTE • GREENVILLE • ATLANTA



S-L-T

SACO-LOWELL-TORRINGTON
NEEDLE BEARING

TOP ROLLS

STANDARD EQUIPMENT
ON ALL

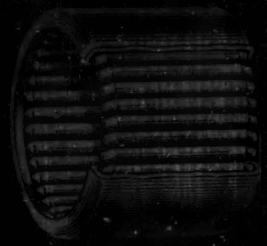
SACO-LOWELL

GWALTNEY

SPINNING FRAMES

- NO WEEKLY OILING
- NO SPOILED YARN
- NO ROLL PICKING
- NO WASTED OIL

S-L-T TOP ROLLS are manufactured by THE TORRINGTON COMPANY, Torrington, Conn., and are available exclusively through SACO-LOWELL



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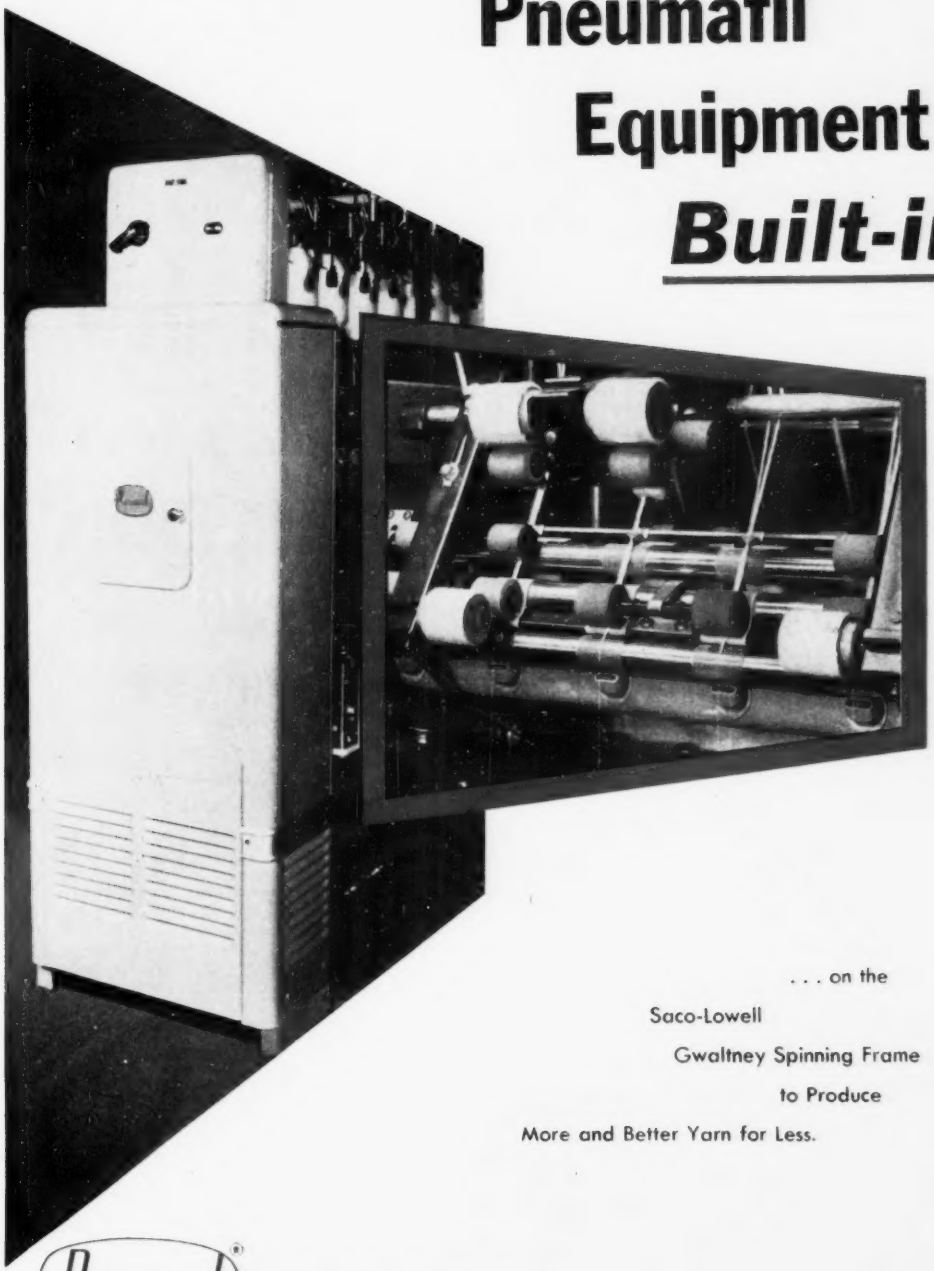

. . . on the
Saco-Lowell
Gwaltney Spinning Frame
to Produce
More and Better Yarn for Less.

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Designed for the
SACO-LOWELL
GWALTNEY
SPINNING FRAME

RADICALLY NEW SPINNING FRAME DESIGNED WITH REYNOLDS ALUMINUM

FOR SPEED!..EFFICIENCY!..ECONOMY!

Result of 7 Years Planning Eagerly Welcomed by Textile Industry—Seven years ago, Saco-Lowell Shops, Biddeford, Maine, set out to design a completely new, radically different spinning frame incorporating new ideas and materials. Strong, lightweight aluminum proved the ideal metal for their purpose.

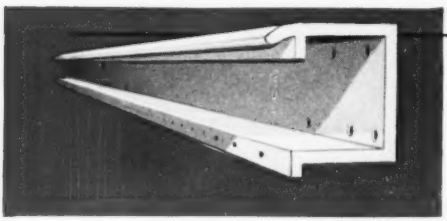
Recognizing Reynolds' wide range of experience in designing for the textile field, they called on Reynolds Aluminum Specialists to help develop parts for the new spinning frame. Many parts previously made of sheet steel, structurals or castings were designed as aluminum extrusions or die castings.

In this way they were able to take advantage of the wide flexibility of fabricating methods provided by aluminum. As a result, there is a minimum of fabrication needed and very little scrap loss. The lighter weight means easier handling, and thus, lower fabricating costs.

The advantages of aluminum work for the mills, too. Lighter weight on ring rails, for instance, means smoother reciprocating motions, higher speeds and power savings. Aluminum parts can't rust, can't stain the fibers. Since the machine is lighter, floor loads are reduced.

This new Gwaltney produces a large package and is radically new in design and operation . . . planned from the very first as an improvement over old-fashioned machines. Aluminum, *naturally*, was a key material in such planning . . . and Reynolds Aluminum Specialists were in there from the beginning.

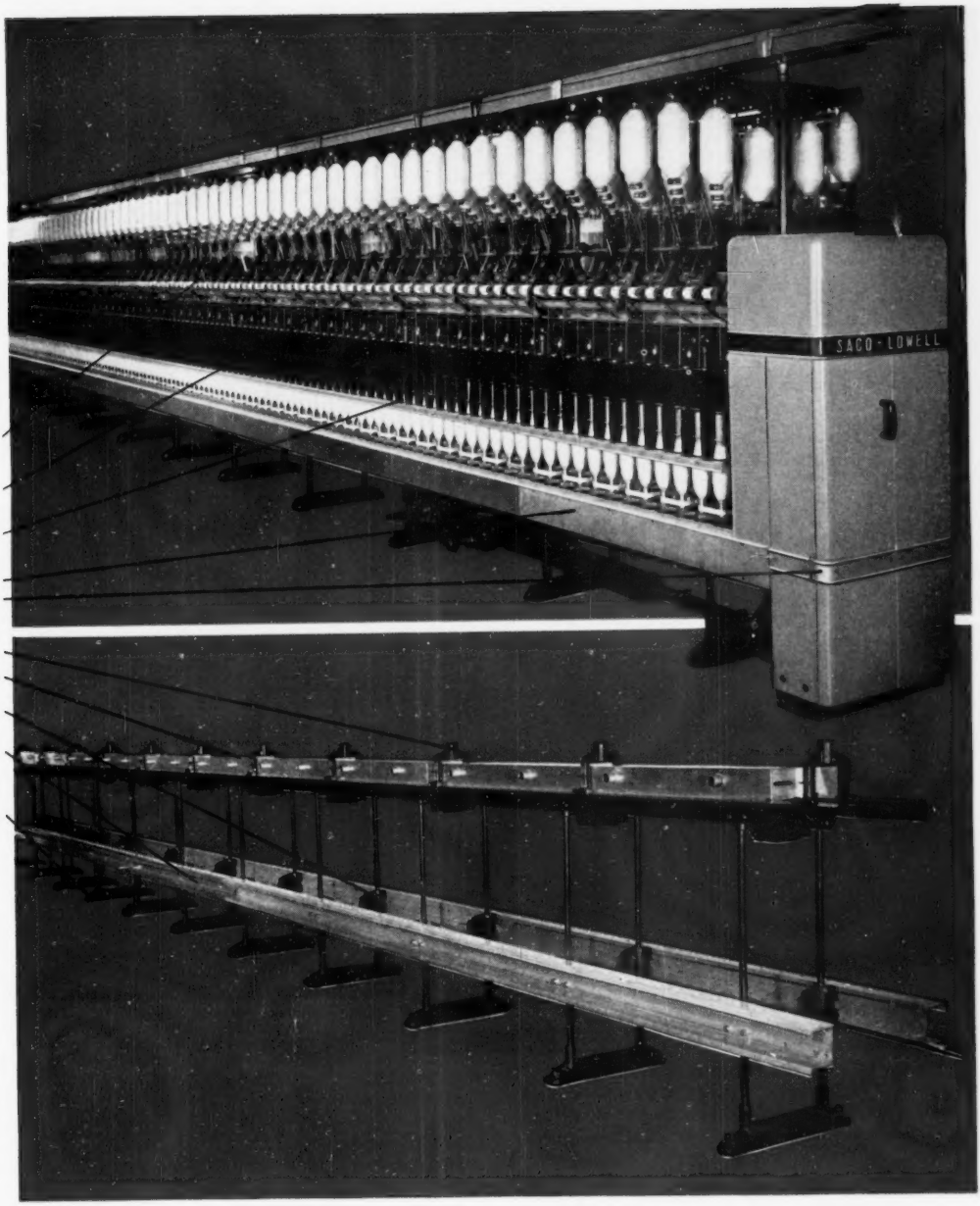
To find out more about the advantages of aluminum and how it can benefit you, contact your Reynolds Aluminum Specialist. You'll find him listed under "Aluminum" in your classified telephone directory. For further information on aluminum and extrusions in the textile industry, send for your *free* copies of the Reynolds Technical books, "Aluminum in the Textile Industry" and "Designing with Aluminum Extrusions". Write to Reynolds Metals Company, 2534 South Third Street, Louisville 1, Kentucky.



1500 LBS. OF ALUMINUM GO INTO THE NEW GWALTNEY

800 LBS. OF EXTRUSIONS
500 LBS. OF DIE-CASTINGS
200 LBS. OF SHEET ALUMINUM

The spindle rails of this exceptional new spinning frame are made of aluminum extrusions weighing over 525 pounds. They are more easily and quickly manufactured than welded steel assemblies because many machining operations are eliminated. Only the holes need be drilled. The one-piece aluminum extrusions with aluminum sheet cover plates provide completely closed box sections for greater rigidity, minimum vibration and faster, more accurate operation.

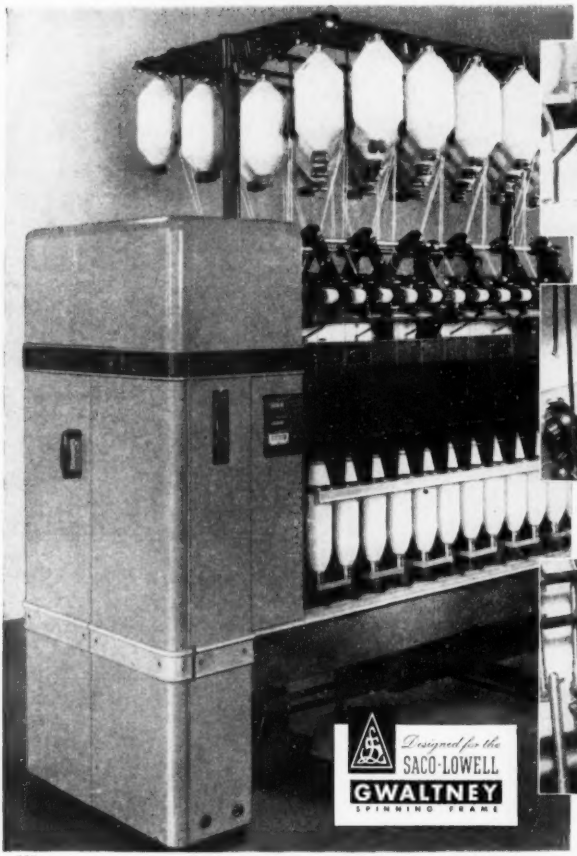


REYNOLDS ALUMINUM

REYNOLDS METALS

MODERN DESIGN HAS ALUMINUM IN MIND

New Departure... is proud to play a part in the new Saco-Lowell Gwaltney Spinning Frame — in the positions indicated:



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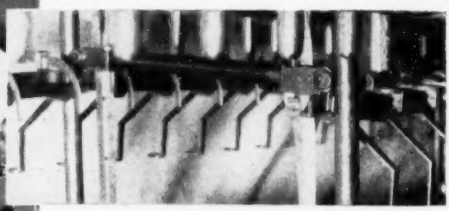
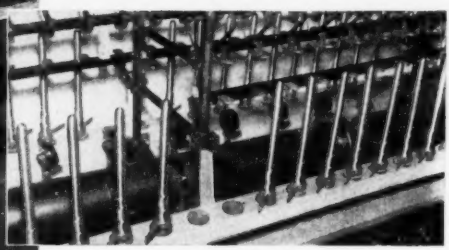
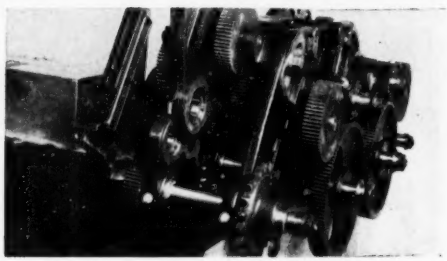


New Departure Ball Bearings in Guide Rolls on Lift Rods

New Departure Ball Bearings in each Tension Pulley



New Departure Ball Bearings in each New Era Spindle



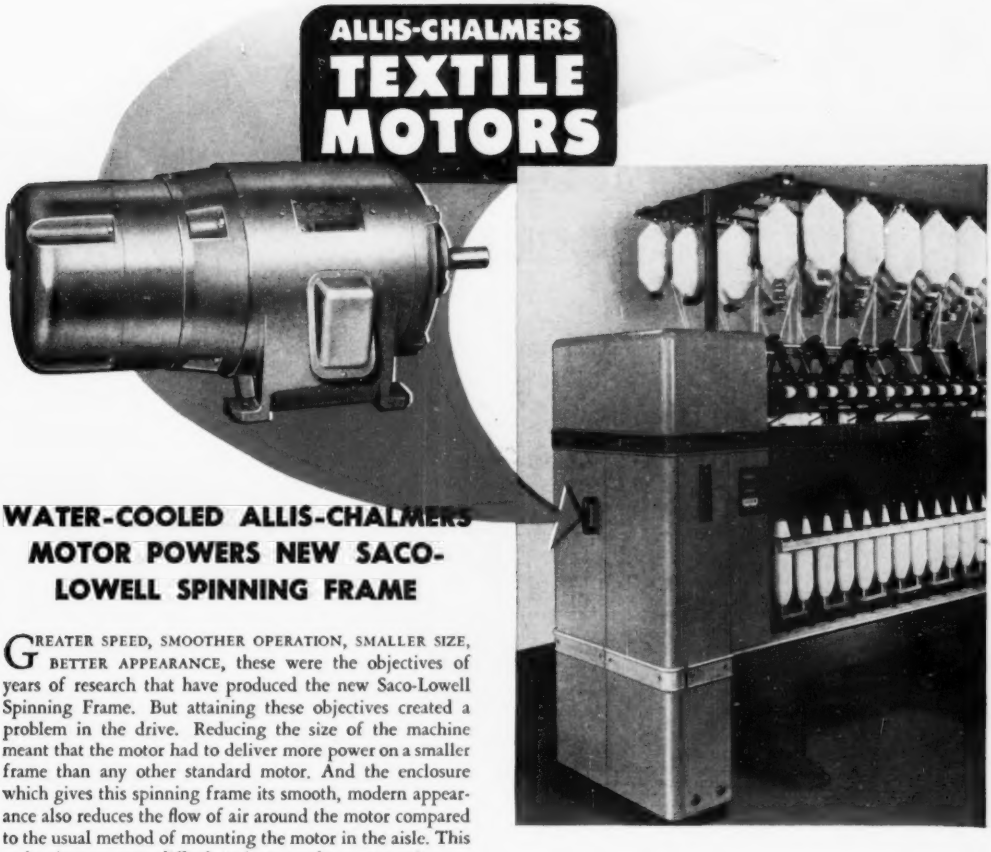
New Departure Ball Bearings in the Drive End Assembly

Nothing Rolls Like a Ball...

NEW DEPARTURE
BALL BEARINGS

NEW DEPARTURE • DIVISION OF GENERAL MOTORS
BRISTOL, CONNECTICUT

SPECIAL MOTOR
Solves Space Problem



WATER-COOLED ALLIS-CHALMERS MOTOR POWERS NEW SACO-LOWELL SPINNING FRAME

GREATER SPEED, SMOOTHER OPERATION, SMALLER SIZE, BETTER APPEARANCE, these were the objectives of years of research that have produced the new Saco-Lowell Spinning Frame. But attaining these objectives created a problem in the drive. Reducing the size of the machine meant that the motor had to deliver more power on a smaller frame than any other standard motor. And the enclosure which gives this spinning frame its smooth, modern appearance also reduces the flow of air around the motor compared to the usual method of mounting the motor in the aisle. This makes it even more difficult to increase the motor rating.

Saco-Lowell turned to Allis-Chalmers, with wide experience in textile machinery drives, for the solution to this problem. Allis-Chalmers engineers designed a water-cooled motor which delivers the required horsepower on a frame smaller than standard. The motor has characteristics specially suited to the application, high efficiency, and protection against overheating due to lack of water. A 50 foot-pound electrically operated brake is motor mounted.

Allis-Chalmers engineers have provided the drive know-how for many of the industry's advanced developments. If you have a problem involving control, motors, or *Texrope* V-belt drives, get in touch with the textile specialist in your Allis-Chalmers District Office or write Allis-Chalmers, Milwaukee 1, Wisconsin.

A-3642

Texrope is an Allis-Chalmers trademark.

ALLIS-CHALMERS

COMPLETE SERVICE . . . *From Power Line to Machine*

DRY TYPE TRANSFORMERS — CONTROL — MOTOR — TEXROPE V-BELT DRIVES

Designed for the
SACO-LOWELL
GWALTNEY
SPINNING FRAME

A-P-T- *Synthetic* BOBBIN

Metal tip, plastic seat and laminated barrel combined, by patented "Plasti-weld" method, into a homogeneous unit of permanent precision.

Designed for and used on the GWALTNEY FRAME

A.P.T.
the finest of yarn carriers

American Paper Tube Co.

ESTABLISHED 1898

WOONSOCKET, R. I. GREENVILLE, S. C.

CANADIAN REPRESENTATIVE,
HUGH WILLIAMS & CO., TORONTO, CANADA

54 YEARS OF RESPONSIBILITY FOR EFFICIENT AND ECONOMICAL CARRIER SERVICE

ALCOA
salutes

THE GWALTNEY SACO-LOWELL
Spinning Frame

The use of Alcoa Aluminum in the building of this revolutionary new yarn spinning equipment, lowers handling and machining costs and increases speed of assembly. Alcoa Extruded Shapes, used for many applications, eliminate building up sections by costly fabrication and joining. Aluminum's resistance to corrosion and natural lustrous appearance makes it ideal for trim applications.

ALUMINUM COMPANY OF AMERICA
1912D Gulf Building • Pittsburgh 19, Pennsylvania

« »

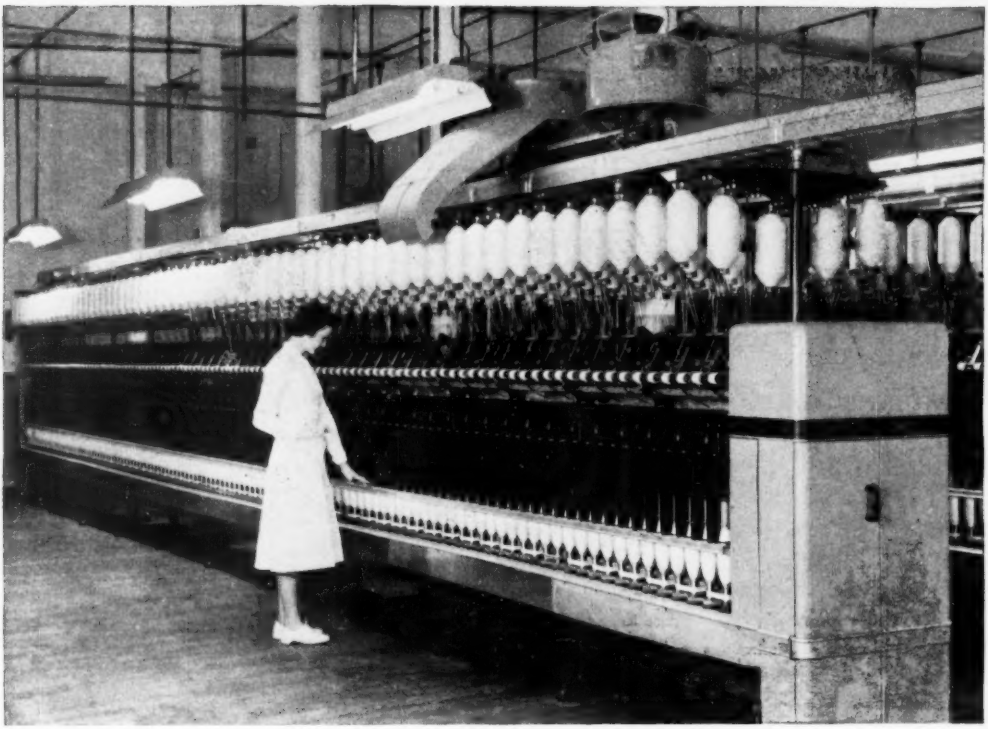
We are proud to supply
the following materials for production
of this new frame

ALCOA EXTRUDED SHAPES
Ring Rail Spindle Rail
Trim and miscellaneous parts

ALCOA DIE CASTINGS
Eliminate many expensive and
complicated machining operations

ALCOA ALUMINUM SHEET
ALCOA ALUMINUM TUBING
For various applications

ALCOA
ALCOA®
First in Aluminum



Parks-Cramer Frame and Up-draft Cleaning as developed and engineered for installations of the new Saco-Lowell Gwaltney Spinning Frame.

Thorough automatic cleaning of frame and overhead surfaces.

More than 17,000,000 spindles of all types now served by Parks-Cramer Traveling Cleaners.

Parks-Cramer Company

Fitchburg, Mass. Charlotte, N. C.

Don't Let Copper Restrictions Stump You

IRON BASE

OILITE

GIVES YOU TOP BEARING PERFORMANCE

- Iron Oilite is an excellent heavy duty bearing material.
- It is a sturdy material, and the load carrying capacity is increased by the hydraulic cushion of the trapped oil with which the bearing metal is impregnated.
- Iron Oilite bearings provide the acme in lubrication; a continuous, unbroken, oil film, on the bearing surfaces.
- Iron Oilite is available in all types of bearings and over a broad range of sizes.
- Iron Oilite is only one of the famous Oilite family of products created by Oilite powder metallurgy.

AMPLEX MANUFACTURING COMPANY
Subsidiary of Chrysler Corporation
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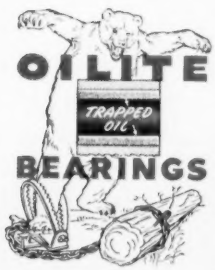

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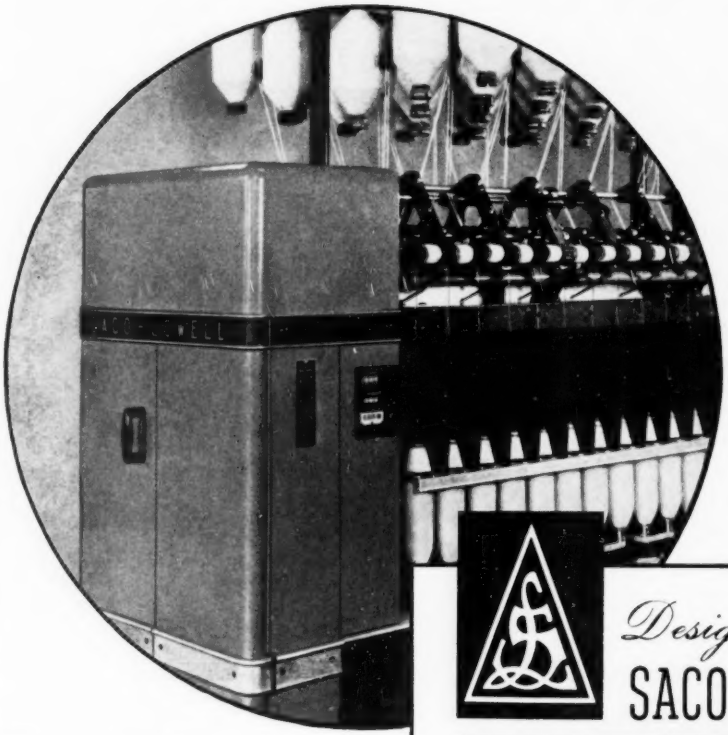
FIELD ENGINEERS AND DEPOTS THROUGHOUT UNITED STATES AND CANADA

Oilite Products include:
BEARINGS, Finished Machine Parts, Cored and Solid Bars, Permanent Filters and Special Units in both ***NON-FERROUS*** *and* ***FERROUS*** *Metals*



Designed for the
SACO-LOWELL
GWALTNEY
SPINNING FRAME

Beautifully balanced design with HYATT cylinder shaft bearings

Saco-Lowell engineers "hewed to the line" in demanding that every component part of their great new machine be in keeping with their advanced spinning fundamental.

That is why they selected Hyatt Roller Bearings for the cylinder shaft positions. Housings and bearings are as simple and correct as the spinning principle of the frame itself. The bearings include these features:

1. Absolute minimum number of parts.
2. Maximum ease of assembly.
3. Maximum load-carrying and life characteristics.
4. Almost perfect concentricity.
5. Very low friction coefficient.
6. Adequate lubricant space and sealing.
7. Complete elimination of unnecessary gadgets such as adapters, collars, locking devices, set screws.
8. Sound bearing engineering principles proved by long experience.
9. High quality precision
10. Over-all moderate cost.

These same advantages will be found in Hyatt applications to other preparatory machinery as well as weaving and finishing equipment. Hyatt Bearings Division, General Motors Corporation, Harrison, N. J.

HYATT ROLLER BEARINGS

Better Balance... GIVES HIGHER SPEEDS!

We design ring travelers to individual specifications, to meet special requirements. We offer mills the longest background of experience in the designing and manufacturing of ring travelers.

NATIONAL . . .

the oldest and largest manufacturer of Ring Spinning and Twisting Travelers in the United States, has been glad to cooperate in developing the "PIERCE E" RING TRAVELER for the

SACO - LOWELL
GWALTNEY
SPINNING FRAME

AMERICAN • HICK'S • WILSON'S

NATIONAL RING TRAVELER CO.

Pawtucket, Rhode Island — Charlotte, North Carolina

Ahead?

A LOT OF THEM ARE HERE!

Not long ago Onyx advertising emphasized our readiness to help you work out problems in lubrication, finishing and dyeing of the new blends made possible by the many new synthetic fibers that are coming out of the laboratories of American chemical plants. We have already helped solve some of these problems. And here's a particular one for which we offer a highly satisfactory solution . . .

dacronyx

DYE ASSISTANT FOR DACRON AND DACRON BLENDS

Dacronyx helps greatly in the production of level shades and increased color value. Comparative tests recently completed, using 10% benzoic acid versus varying amounts of Dacronyx, showed markedly improved dye values using 5 to 7½ % of Dacronyx on the weight of the goods. When 7½ % was used, dye value increase was as much as 100%.

Dyeing periods of 90 minutes were used at temperatures of 180° to 190° F. But the color pick-up during the last 30 minutes was so slight that it seems quite possible that the dyeing time could be reduced to 60 minutes.

We are at your service for further information on Dacronyx . . . and for test samples or test runs.

onyx CHEMICALS FOR DYEING • FINISHING • PRINTING

ONYX OIL & CHEMICAL COMPANY
TEXTILE DIVISION
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Noils Are No Nuisance

in this New York state wool mill

NOILS ARE COLLECTED from 15 of these combers by a pneumatic system devised by High Rock Mills' engineers.

Staff Prepared

LOOK AT the floor area around this Isotta Fraschini comb installed at High Rock Mills, Philmont, N. Y. Spic and Span, isn't it? That's not all. If you were to examine the 15 other combs in the department at any time, even in peak production, you wouldn't find noil waste in the vicinity. Very unusual!

When High Rock set up a combing department, management was duly concerned over noil handling. Why? Work loads, production, maintenance, housekeeping, and noil quality are all influenced by noil handling procedure.

Taking some arbitrary figures, suppose 64s wool were combed at 15 pounds per hour. The noil yield might run 15 to 20%. In about 2 hours, the noil box would be loaded. In normal practice the comb is stopped, and the noil box is dumped.

The result: several minutes of valuable production time are lost, an experienced operator wastes precious minutes in non-productive effort, fly and noil are scattered over machinery and floors, and the quality of noil suffers in handling.

Here's what High Rock did about that. Borrowing a few ideas which have been successful in stripping cards and collecting soft waste on spinning frames, High Rock's engineers devised a pneumatic system for collecting noils.

Air ducts were installed under the floor of the combing department, and ports were located underneath each of the 16 combs. As noil accumulates beneath the machines, a high cfm fan blows it into a central receiver where every bit of noil is salvaged in clean condition.

The result: machine efficiency has been improved measureably: work load for the operator is now 8 combs: a better-kept, cleaner machine translated into less downtime; a higher percentage of noil is being salvaged; improved housekeeping means better working conditions; and a higher money value for high quality noil is being realized.

Noils are no nuisance at High Rock Mills.

Supervisor Responsibilities (Good Housekeeping)

(*Continued from page* 123)

housekeeping job is complete without clean, well-kept floors. Naturally the floor should be in good repair. Worn, uneven floors not only look bad, but they are definitely hazardous. A person might make a misstep and fall because of a rough place in the floor, or a loaded truck might overturn with disastrous results. Accumulations of oil or grease are danger spots and should be cleaned at once. By whatever method used, the floors should be kept clean.

The drink bottle problem is an ever-present one. If the mill permits bottles to be brought by the employees to the job, conveniently located bottle racks should be provided and the operatives should be taught to use them. Drink bottles thrown in yarn, roving, or waste boxes may be broken, becoming a bad accident hazard. We think that an overseer is justified in using disciplinary means, if necessary, in the solution of this problem.

The overseer should set a good example by practicing good housekeeping in his own office. Not only should the office be kept clean, but his desk and files should be in order. The once-a-month habit of clearing out desk, office cabinets, etc., is a good one to acquire. It is surprising how much worthless material can be accumulated in a month. (The author intends to re-read this paragraph upon publication and put it into practice!)

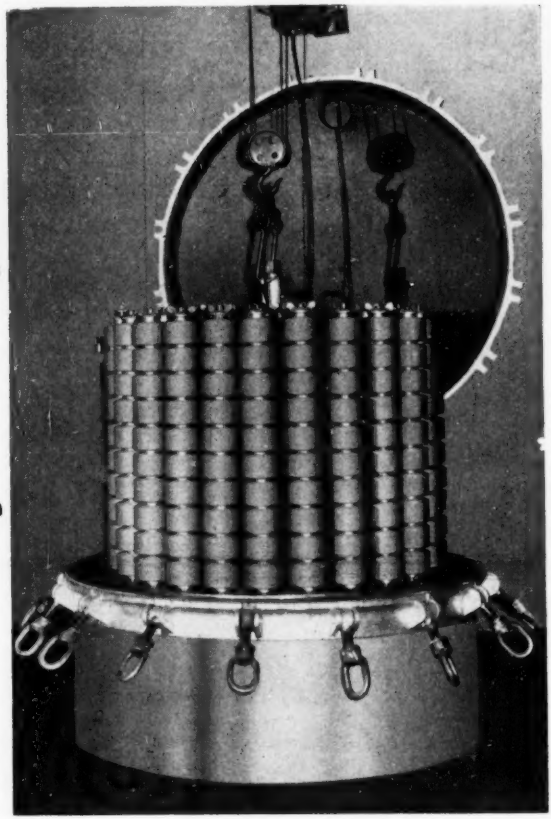
Storage space should be provided for air hose, brooms, and other cleaning equipment. Greasy waste should not be stored, but removed from the room at once to the place designated by the mill; such waste is dangerous because of spontaneous combustion.

Housekeeping is a big job, and a continuous job, but it pays dividends, including a lot of personal satisfaction in a job well done. *(To be continued.)*

Still The Most Dependable Equipment

FOR REDUCING DYEING COSTS AND LABOR

GASTON COUNTY'S COMBINATION EXTRACTOR-DRYER FITS THE REQUIREMENT OF ANY DYE HOUSE



Here's the outstanding combination extractor-dryer — with speed and efficiency proved by many years of satisfactory mill use.

Mills using this equipment report the extracting and drying of package-dyed yarn in periods of one and one-half to two hours. Drying time varies with the temperature used, density of packages, count of yarn and types of color.

Dye houses of any capacity benefit from the quick-drying, space and labor-saving features of the Gaston County combination extractor-dryer. For small production, one machine does the entire job — for larger production it may be used for extracting only, in combination with open port dryers. Let us show you how this machine can save money for you, as it has for other leading dyers.

Albert R. Breen
80 East Jackson Blvd.
Chicago, Ill.

Gaston County Dyeing Machine Co.
Terminal Building
68 Hudson St.
Hoboken, N. J.
G. Lindner, Mgr.

The Rudel Machinery Co., Ltd.
614 St. James St., W.,
Montreal
137 Wellington St., W., Toronto

GASTON COUNTY DYEING MACHINE CO.

PIONEERS IN AUTOMATICALLY CONTROLLED DYEING MACHINES

STANLEY, NORTH CAROLINA

Type of control which can be maintained, economies which may result, quality which may be expected when

Dyeing by the "Marhen" Method

By D. E. MARNON
General Dyestuff Corporation

THE IMPORTANCE of being able to measure the reduction potential in a dyebath was illustrated by an incident during the dyeing of 2000 yards of English broadcloth [utilizing the "Marhen" method for controlled vat dyeing*].

The fabric was to be padded and wet-developed at 200 F in a Williams unit. The shade was royal blue (1 lb/gal Vat Blue BC Single Paste).

The bath was charged with hydroxylamine and nitrite in addition to caustic, hydro, and color. Constant potential at 1025 MV was maintained by suitable addition of nitrite, caustic, and hydro. The dyeing was excellent.

A leaky steam valve caused the units to boil. This in turn caused the shade to go red and flat. Simultaneously the rise in potential was noted and corrective measures in additions were made. By the time the dyer had decided to run in a leader and remake the units, the shade was normal again and so these expensive measures were not necessary.

Similar examples serve to illustrate the type of control which can be maintained, the economies which may result, and quality which may be expected in controlled, continuous water-phase development of vat dyes. They have controlled the dyeing by Williams Unit water-phase of some 300,000 yards of material.

Jig Dyeing. The introduction of reduction potential control into jig dyeing was brought about by the problem of dyeing Fortisan, a highly oriented rayon. Because some difficulty had been encountered with this fabric, it was felt that the most efficiency would be realized if the dyebath was maintained constant at a maximum potential commensurate with the alkali sensitivity of this material. Many thousands of yards of Fortisan were dyed with this control and it was found that the dyeing efficiency was improved sufficiently to enable us to cut the number of ends in dye by half in certain cases.

An investigation of jig dyeing showed some jig baths were being operated with chemical concentrations far in excess of that actually required. Cuts in hydro consumption of as much as 6 lb for a 1000-yard roll have been made. In other cases, definite deficiencies were indicated. One plant was able to cut the pad formula 20% as a result of increasing the caustic concentration by 30%. In another case, involving a Sea Island poplin, the amount of caustic had to be in-

Presented before Southeastern Section, AATCC, Feb. 2.

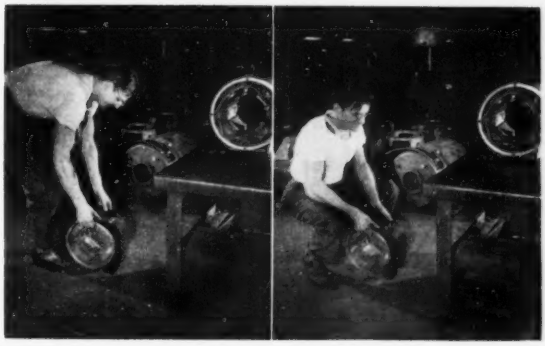
*See TI for December, page 151, for announcement of the development of the "Marhen" process by D. E. Marnon and J. H. Hennessey of General Dyestuff Corp.

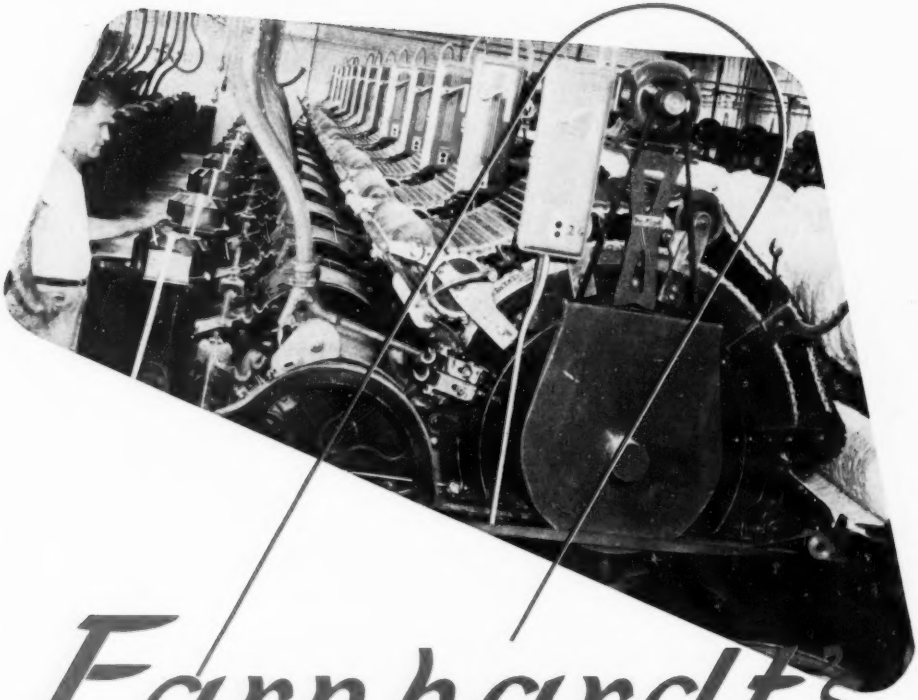
Lift Safely—No More Time Is Required

Proper lifting procedure is demonstrated in the left photo above while the right photo illustrates the lifting posture that so often causes injuries.

When lifting: (1) Bend the knees, placing the strain on the leg muscles instead of on the back; (2) keep the load close to the body and lift in a smooth, gradual motion instead of an uneven, jerky movement; (3) use a hoist when necessary; (4) whether using a hoist or not, clear vision over the load should be maintained at all times.

Westinghouse Electric Corp.





Earnhardt's

HIGH PRODUCING — ECONOMICAL

INDIVIDUAL CARD DRIVE ASSEMBLY

Earnhardt's new individual card drive assembly is the most economical, efficient drive on the market. Powered by a Westinghouse lint-free 1½ HP special card motor, the Earnhardt drive offers the highest production and the lowest maintenance possible! Over 500 are in production at various mills such as the mill in Spartanburg, S. C., pictured above. Earnhardt's assembly requires less floor space per card and will be installed upon your request. All inquiries handled promptly!

Write or phone today!
P. O. Box 966,
Tel. 3-6301

Earnhardt Electric Service Inc.
SPARTANBURG, SOUTH CAROLINA

creased from 14 to 26 quarts, as indicated by the instrument, before a satisfactory dyeing was obtained. Very seldom did the recording of the potential developed indicate that optimum conditions existed; for the most part these measurements have shown that some adjustment in the chemical balance was necessary.

This measuring equipment has many other ramifications for the wet processor. A few of these are the determination of purity of hydro, the measurement and control of sulfur color application, and the measurement and control of oxidation.

For spot-checking body knit goods—

A Portable Inspection Machine

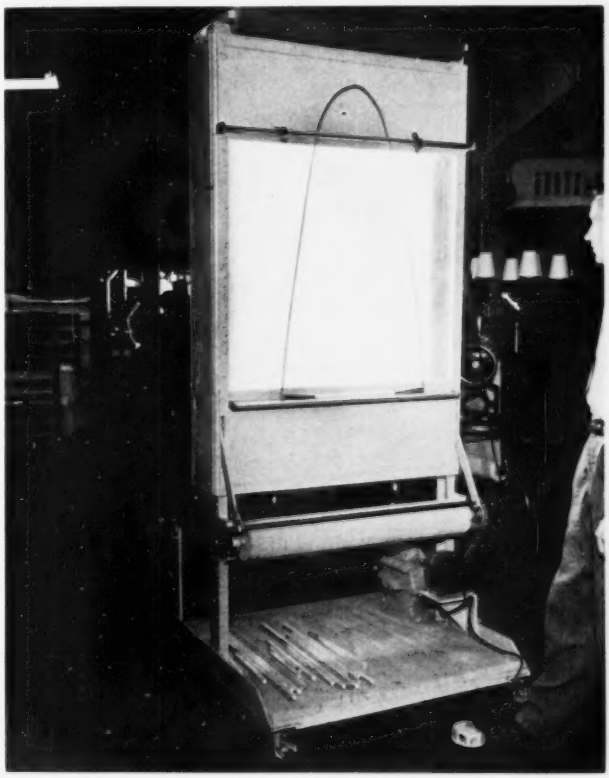
Staff Prepared

A PORTABLE spot-check inspection machine is used to examine knitted fabrics for bad yarn, unevenness, and other irregularities at E-Z Mills. The machine serves primarily to show bad yarn after it has been knitted into the fabric. On occasion, it is desirable to show a batch of faulty fabric to the yarn manufacturer who may have supplied some bad yarn which went unnoticed until it showed up in the fabric.

The inspection carriage is equipped with four casters, and may be pushed aside and out of the way when not in use. If bad cloth shows up because the yarn is bad or for any other reason, a roll of cloth may be inspected in a few minutes to show the supervisor, buyer, or yarn manufacturer what the fault is.

Made in the Bennington, Vermont, plant of E-Z Mills, Inc., the machine is equipped with three banks of fluorescent tubes arranged vertically in groups of three. The fluorescent tubes measure 48 inches in length and the glass cover is etched to disperse the light evenly. The light enclosure is made of wood put together in a simple box-like structure which stands in an upright position as shown in the accompanying illustration.

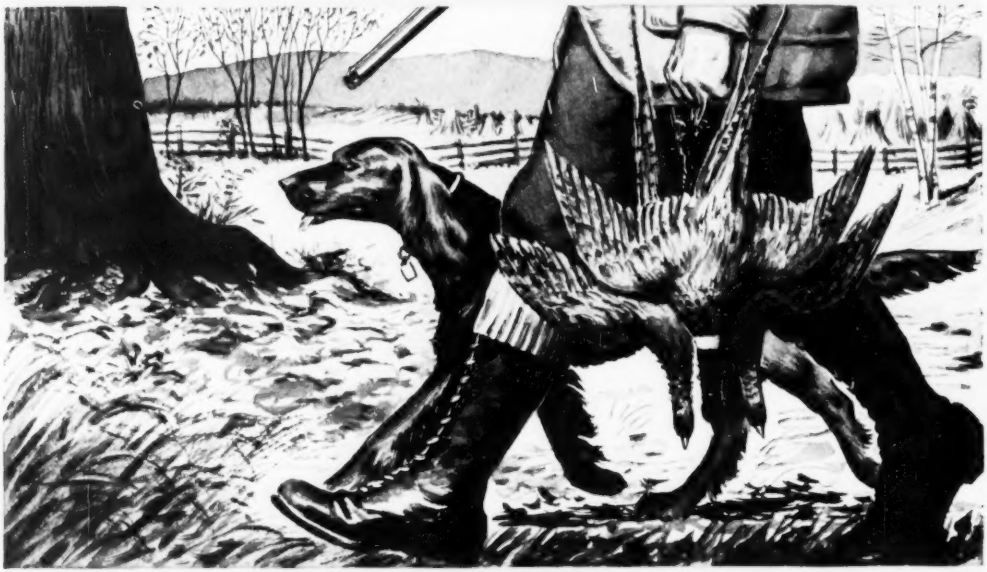
A foot-switch is provided to control cloth movement on the inspection machine, and standard cloth spreaders and rolls are used.



INSPECTION MACHINE is equipped with foot-switch, standard cloth spreaders and rolls. Roll of fabric is placed behind the light enclosure and is threaded over the machine, down in front of the lights and onto a sand roll.

Teamwork

Tired but happy, home they go with a good bag. A man and his dog, the perfect team for good hunting. Teamwork helps — in sport — in industry.



What can we do to help insure the future of your business? That's what Butterworth engineers have been asking for 131 years — and we ask the question with special meaning today.

If you are thinking of new machines, we will do the utmost to meet your requirements, within the limits of our metal allotments. If you are making long range plans our engineers are at your service. Even now they are teamed with many of America's leading mills, thinking of the years ahead and planning with them to maintain their competitive position.

Butterworth service is offered too, to help your wet finishing department get the most out of what you now have — to keep it operating at peak efficiency. It may be only a spare part you need — but if you need it in a hurry, you'll get it in a hurry if it is humanly possible. That is a big part of our service.

A letter, a wire or a phone call will put a Butterworth engineer on your team.

H. W. BUTTERWORTH & SONS COMPANY

Bethayres, Penna. : : 187 Westminster Street, Providence, R. I.
1211 Johnston Bldg., Charlotte, N. C.

Machines for Bleaching, Boiling-Out, Mercerizing, Dyeing and Finishing. Pot Spinning Machines for Synthetic Fibers : : Calender Rolls

BUTTERWORTH

EXCLUSIVE

Practical Terry Weaving and Designing

★ ***Defects in weaving—how to correct and prevent them***

★ ***Maintaining production and quality and figuring job loads***

★ ***Specially constructed Jacquards, both British and American***

★ ***Selection of design paper, painting the pattern, and card cutting instructions for C&K special terry Jacquard***

By T. HARGREAVES
Superintendent, Caldwell Linen Mills (Canada)

Article 6*

THE WEAVING of terry towels calls for specialized knowledge to avoid the pitfalls that are inherent and ever present, and which cause many headaches, right through weaver to fixer to second-hand to superintendent, and finally to the sales staff.

One ever present trouble, occurring especially when weaving reversible patterns in two tones, or color and white terry, where one color shows on the face and the other color on the underside of the towel, or alternately changing from face to back, is the tendency of the color to mix into the part where only white terry should show, or white terry where colored should show.

Preventing Mixed Terry; Mingling. This defect, known by such names as mixed terry, mingling, dog's teeth, etc., while ever present, can easily be remedied, and not be a repetitive trouble.

A terry towel is woven from two loom beams. The bottom or ground beam is very heavily weighted, and the ends from this beam are woven at a tension that is much higher than is customary in weaving flat fabrics. These ends interweave with the filling to produce the foundation cloth of the terry weave.

The ends that form the terry loops on both faces of the cloth are carried on the top beam. It is very lightly weighted, and in addition is usually turned in a positive delivery by the let-off mechanism, which is found on all modern terry looms. Consequently, the pile warp has little tension during weaving, and practically none at all at the beat up or fast pick, when the terry loop is formed.

Therefore this loosely weighted pile end is likely to be adversely affected by anything with which it may come into contact. It is well known to all terry designers that a loop on top is formed by weaving the pile end to lift for the first pick, lower for the second, lift again on the third pick. A loop underneath is formed by leaving the pile end down on the first pick, lifted on the second, and lowered again for the third pick. That completes the cycle of the pile weave.

Now let us examine the influences that may affect these two sets of ends—the tightly woven ground ends and the lightly tensioned pile ends.

To produce a towel that is 24½ in. wide at the loom, it will be necessary to reed the yarn about 27 in. wide. Thus there is a shrinkage in width of 2½ in. The shrinkage is equal at both sides and towards the center. The usual method of entering the threads in the reed is two ends per dent, one being a pile end and the companion a ground end. The ends have been drawn, one pile, one ground, through the heddles.

If the drawing operation commences at the right hand side, the pile end will be at the right hand of its companion ground end in each dent of the reed. But if the drawing operation commences at the left hand side, then each pile end will be at the left hand side of its companion ground end in each dent of the reed. The trouble of mixed terry will take place at the left side of the cloth being woven, where the pile end is at the right hand side; and, conversely, at the

*Articles 1, 2, 3, 4, and 5 appeared in the September, October, December, January, and March issues, respectively.

Four Louis Allis Type KWA "Soft Start" Motors Driving Roving Frames. Note the small "across-the-line" starters.

Reduce "Ends Down" Time with

LOUIS ALLIS "Soft Start" Motors

Here's another Louis Allis "first" — the motor specifically designed for roving frames, special spinning frames, spoolers, quillers and all applications requiring a smooth, soft start. It reduces installation costs and "ends down" time for increased production.

Special electrical design gives smooth, soft start, gradually increasing acceleration torque. Acceleration is slow, stepless, gradual.

Across-the-line starting is possible due to the special electrical design.

Special motor connections furnish higher torque for "break-in" period. Leads can then be easily changed to the lower torque connection to fully utilize the "soft start" feature.

Excellent jogging characteristics. Design provides accurate, positive positioning.

Louis Allis self-cleaning construction throughout. Smooth, streamlined contours do not let dust or lint adhere to any motor surface.

Sizes and speeds to fit every textile machine application, 2 horsepower to 7.5 horsepower, 900 and 1200 RPM are standard. Other sizes and speeds available on request.

The Louis Allis "Soft Start" Self-Cleaning Textile Motor is the drive you've been looking for. Its slow, easy start without need for an expensive reduced voltage starter — its other outstanding features — make it the answer to *your* drive problems. Write today for further information or contact the Louis Allis district office nearest you.

TE-101

THE LOUIS ALLIS CO., Milwaukee 7, Wisconsin

We specialize in SPECIAL MOTORS

Standard or special — we build it. Whatever electrical or mechanical modifications or features you need, there is a Louis Allis motor that will do your toughest jobs better.

right hand side of the cloth when the pile ends are on the left hand side of the companion ground end in each dent of the reed.

Naturally the question arises—Why?

Because the ground ends, being very heavily weighted and consequently tightly woven, must bear heavily against the sides of the reed wires as the shrinkage from yarn spread to cloth width takes place during weaving. When the pile end is at the right hand side of its companion ground end in the dents of the reed, then everything is all right. But that applies only to the right hand half of the towel. The left hand half of the towel will show mixed or ragged looking terry loops.

At this left hand side the ground ends are trapping the pile ends against the reed wires. As a result, when the fast pick, of the three picks forming the terry weave cycle, is beat up to produce the loops, the imprisoned pile ends are not perfectly looped. They mingle with the other ends, hang loose, and are pushed out of position, often being interwoven wrongly, while hanging loosely. The loop will go to the underside instead of to the top as intended, or vice versa, thus causing mixed terry, or loose loops.

The remedy is to draw the pile ends at the right hand side of their companion ground ends in each dent in the right half of the towel. Somewhere near the center draw one pile-one ground-one pile in one dent. This reverses the drawing and from this point to the left hand selvage the pile ends will be at the left hand side of the companion ground end in each dent of the reed.

Every loom seems to be affected slightly differently from other looms. Some looms need reversing from the center, others only need about 9 or 10 inches at one side reversed. The most practical manner is to give instructions to reverse the last 9 inches when drawing-in new sets, and where necessary to increase this amount at the loom, when the full effect is before the eyes.

The three ends in one dent make a slightly thick place, but this is not noticeable after the towel has been bleached. Often it is possible to start this reversing at the end of a stripe where any thick place would not be noticeable.

Another method to remedy this trouble—and a very successful one in a full harness Jacquard pattern towel—is to use the two and two method of drawing-in the pile and ground threads in the heddles, Jacquard harness, and reed. The first pile end is drawn through the eye of the Jacquard harness. Then instead of a ground end, another pile end is drawn through the next eye of the Jacquard harness. Now draw the first ground end through the eye in the heddle harness, and again another ground end in its respective eye of the ground heddles. Thus, across the full width of the yarn spread the ends will lie: pile, pile, ground, ground.

These are now entered in the reed as follows: 2 pile ends in one dent of the reed, 2 ground ends in the next dent, repeating all across the full width of the yarn spread. Clear cut woven designs will result, irrespective of whether the design is alternating color and white reversible terry, or solid pattern blocks of terry all on top alternating with solid pattern blocks of terry all underneath.

The principle is the same as in "reversing the drawing." The pile ends are kept free from interference by the tight ground ends, the pile being protected by the reed wires from the pressure of the ground. An added advantage is that no alteration is necessary to the drawing in the reed, and no thick place where three ends were drawn in one dent as in "reversing the drawing" method. This method should only be used in good quality terry towels with fairly fine reeds and good terry cover.

In low quality towels with low picks the change in construction would tend to show, but in good quality towels the constructional change cannot be seen. On the contrary, the towel is much improved by the clear distinctive lines of the pattern and the complete absence of terry loops showing in the design where no terry is intended, as in block terry patterns.

Maintaining Production and Quality

There is no magic formula that will accomplish the full aim of maintaining peak production, and good quality goods, other than paying attention to all details, large or small, in every department from spinning to weaving.

This applies irrespective of what kinds of textiles are being produced. Terry towel weaving is no exception to this rule, but in addition added problems are encountered due to the special type of cloth being produced. Terry towel weaving demands a loom that is very complex in its construction; specialized knowledge is needed to operate it.

There are many probable causes that will decrease production and increase seconds over and above the probabilities of those encountered in plain cloth weaving:

1. There are two beams in the loom. The pile beam runs out every few days, even though as large as 24-in. diameter beam heads are used. This causes many loom stops for these beam changes.

2. So far, no reliable warp stop motion has been developed for broken pile ends from the top beam. Consequently there are great dangers of pile warp tangles behind the drop wires used for the ground warp.

3. Should the filling break, considerable skill is called for on the part of the weaver to make a perfect re-start, and not cause a second. Normally, this is a simple problem in plain weaving, but in terry weaving it is the main cause of seconds.

Job Loads Figured Differently. Usually the number of looms that are allotted to a weaver is determined by the number of warp and filling breakage stops that occur in a given time. This may serve well for plain or allied weaving, where the loom stops immediately when an end breaks, with no complica-

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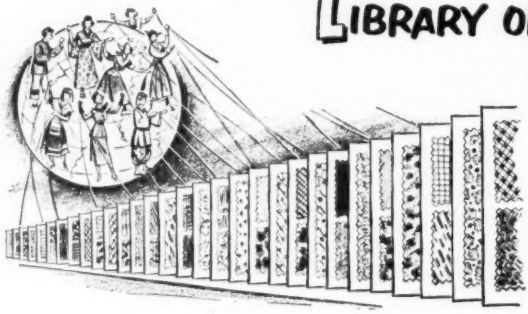

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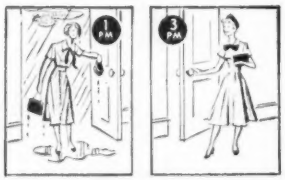

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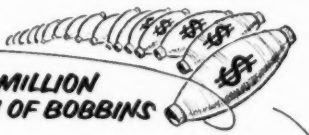

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BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

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tions for the weaver to piece up and re-enter such broken ends. In terry weaving such calculations are not so simple.

Suppose a weaver tends about eight dobby looms, using an average of 12 harnesses in each loom, and possibly four different colored filling shuttles in the multiple box motion. He is fully occupied in attending to one of these looms. Further, suppose that on one of the other looms in the set a pile end breaks. The loom does not stop because there is no pile warp stop motion. The loom runs 162 picks per minute, with about a 40 pick gear, which is approximately four inches of cloth per minute.

Three minutes may elapse before the weaver reaches that loom to find that a pile end has broken. With 12 harnesses in a terry towel loom it is difficult for the weaver to see such broken pile ends, and it will not show on the face of the cloth if the broken pile end was forming loops on the under side. Usually, such broken ends are only noticed when patrolling the back of the loom. As the terry loops are using yarn five times as fast as the ground, there are twenty inches of pile yarn and not four inches accumulating each minute behind the drop wires of the ground warp (from this one broken pile thread).

If it is three minutes before the weaver noticed it, 60 inches of tangled pile end have accumulated. If these 60 inches have tangled around other pile ends, then the weaver has trouble on his hands in untangling these yarns.

What would have been a simple matter to remedy in a plain loom, is several minutes work for the terry loom weaver. Production is lost, and, whereas such end breakage would not be a second in plain cloth weaving, the tangled terry has definitely disturbed the even lie of the terry loops so that a second is inevitable. Furthermore, while the weaver is fully engaged on this loom, there is a possibility of a tangle on one or another of the looms in his charge.

Many efforts and much thought have been expended trying to devise a pile warp stop motion. A certain amount of success has been obtained, but no fool proof results.

The fact that the pile beam is positively turned by the pile let-off motion, causes all pile warp ends to slacken slightly at the moment of beating up the three picks, and as a result the drop wires descend. If the loom is fitted with the electrical system of drop wires, such slackening will cause the loom to stop, even though the ends are intact and not one broken. This is annoying to the weaver and he loses production; the loom fixer then puts on excessive reed opening to try to keep the pile ends tight. The result is very ridgy terry, as the let-off motion for the pile beam will drag back the over high loop thus formed, because it was not set for such high terry loops. High and low terries are thus formed and ridgy lines spoil the appearance of the terry cloth, and are seconds.

To remedy this the drop wires on the pile ends are supported, and operated so that they only feel for the broken end on one pick out of the three forming the terry cycle of picks. This is a little more successful. Still, the loom will stop occasionally when no end is broken. Even though very light, specially constructed drop wires are used on the pile ends, their weight tends to drag the pile ends back out of the terry loops previously woven. These slack ends are found chiefly near the temples.

On dobby looms an arrangement was made whereby the drop wires on the pile were supported for 11 picks and allowed to feel for any broken pile ends on every 12th pick. This, so far, produced the best results but still is not the fool proof method being sought.

In low reed goods where one-pile-one ground is the order of drawing, fairly good results are obtained. However, in heavy styles such as where two pile ends are used for each ground end, other complications arise.

For example, if 672 ground ends and 1200 pile ends were in a warp spread of 27 inches, with the 672 ground ends on 2 banks of drop wires and the 1200 pile ends on another 2 banks of drop wires—with so many drop wires the loosely tensioned pile ends would have great difficulty in threading their way through such a mass of obstruction.

The smallest spinning slub or oversized knot would tend to drag back the pile yarn from the loops previously woven, and either stop the loom because of the slackened end or make a slight tangle. One way or another it either causes an annoyance to the weaver or disturbs the even lay of the terry so as to make a second. No appreciable gain in production, possibly a small loss, is the final summary. Large tangles are completely eliminated, but replacing this annoyance are irritating "trip offs" when no end is broken.

Strange to say, the fact that only putting the drop wires on pile threads, and none at all on the ground ends, has so far proved the best method. But how will the loom stop when a ground end breaks? Very easily. The stronger ground end when broken will wrap around its companion pile end. This causes the pile end to go slack, by pulling from the forming loops. In a very few picks the slack pile end is noted by the stop motion and the loom stops, even though it was for a broken ground end not controlled by drop wires.

When Filling Breaks. Should the filling break, the weaver must apply the specialized skill that is called for in terry weaving in order to avoid making an otherwise good towel into a second.

All picks must be pulled out until the third or binding pick of the last complete terry weave cycle has been reached. The reed is brought forward to the fell of the cloth or front center, and the take-up gears are released the correct number of teeth to allow the fell of the cloth to be in the correct position.

The loom is turned over to find the correct pick for a new start. The ground beam and pile beam are pulled back (care must be taken when pulling back the pile beam not to pull back too far, or the terry loops left in the cloth will be pulled out).

The loom is then picked over once to enable the weaver to make certain that it is the first pick of the three-pick cycle of the terry weave. A second pick is then inserted, and the weaver must judge that the distance the first pick is

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held back from the fell of the cloth is the correct distance for the height of loop being woven. If not, a higher or lower terry loop will be made and this will cause a second. If all is correct, the loom is started and a perfect "filling piece-up" is made. Thus, it will be noted that piecing up broken filling in the terry weaving calls for skill on behalf of the weaver, and also takes time.

Warp Preparation. Only the greatest care in the preparation of both pile and ground warps, plus the preparation of perfectly wound filling bobbins, will lead to more production and less seconds when weaving terry cloths. This especially applies when slashing pile warps. Great care should be exercised at the slasher to prevent any two pile ends from sticking together.

The slasher tender should keep the number of ends in each dent of his front reed to an absolute minimum—two per dent if possible. He should strike a new lease at least once per loom beam to prevent flats or stickers. It is almost impossible to open out such stuck ends at the loom during the ordinary process of weaving, owing to the absence of sufficient tension on the pile warp during weaving. Instead they will come up against a ground end drop wire and tangle.

Because filling breakages call for so much time and skill and are such a potential cause of seconds, it is imperative that only the most perfect filling bobbins should be supplied to the weaver. The best quality shuttles and loom shuttle box equipment are also called for to keep filling breaks to an absolute minimum. All these points, plus good loom fixing and skillful weavers, must be watched to maintain production and keep down seconds.

Specially Constructed Jacquards

The usual arrangement for weaving floral and other complex designs in terry cloths is to use a cam loom to operate the ground harnesses, and a double cylinder, double lift Jacquard to control the pile ends.

A terry cloth having an overall fancy pattern rarely needs cross borders to further embellish it. Normally, fancy cross borders demand a weave that is not a terry weave, and necessitate the use of extra cylinders—usually on dobbies.

Having eliminated the necessity of such cross border designs, it is possible to adopt and use specially constructed Jacquards for terry weaving. The Jacquards cannot be used for other than terry weaves. They will, however, weave cloth such as the plain borders not having terry loops, but which in construction is still the same weave as when terry loops are formed.

Whether the pattern is in reversible two-tone terry effects, or patterns demanding blocks of terry on one face of the cloth and no terry loops on the opposite side, similar to tapestry effects, this special terry Jacquard is ideal and a great time and card saver. It also simplifies the painting of the designs on the squared design paper and the Jacquard pattern card cutting operation. Furthermore, one card will serve where three cards were necessary, in the normal system of Jacquards. Last but not least, "off pick" troubles that prevent terry loops being formed, completely disappear. One card is one complete terry weave cycle and so cannot get off pick.

Turning the cylinder on only every third pick to change the card to be presented to the selection needles, means slower movement, thus adding to the life of the cards and machine.

These specially constructed terry Jacquards are not generally known in the majority of terry weaving establishments.

Some fifty years ago a British towel manufacturer adapted one of these Jacquards for his private use, doing all the alterations. Even the company which made the Jacquard was not aware of the changes made. That model has survived the test of time, and today not one but hundreds of them are in continuous daily production by the original firm. Most competing terry towel manufacturers still use the ordinary double cylinder, double lift Jacquard. A few years ago an American firm developed a special terry Jacquard, and did an excellent job.

The American idea, when assembled, proved to be accomplished by entirely different mechanical methods than that adopted and used by the British firm. The British firm, not being itself a Jacquard machinery maker, used an ingenious scheme of rearrangement of the hooks and needles in a standard machine, to accomplish its purpose. Crompton and Knowles, being Jacquard machinery makers and having all the facilities of a modern engineering plant, solved the problem by a completely new approach, using mechanical methods rather than adaptation.

Fig. 12 shows the usual arrangement of hooks and needles in a Jacquard with double lift, double cylinder.

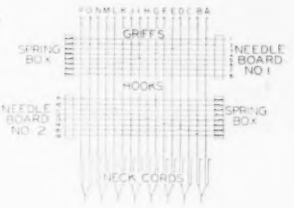

Fig. 12

Fig. 13 shows the usual arrangement of hooks and needles in a

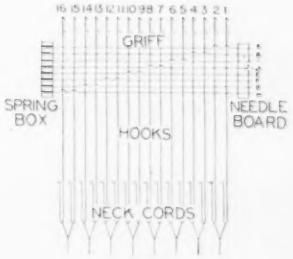

Fig. 13

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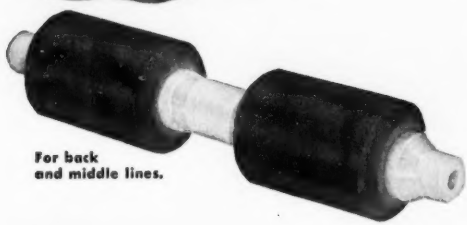

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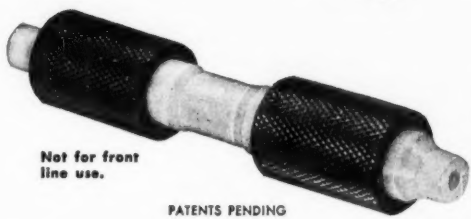

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Jacquard with double lift but single cylinder.

Fig. 14 shows the arrangement for a special terry Jacquard (British). The needles 1 to 16 in Fig. 12 have been replaced by the needles from Fig. 13, eight in number and lettered A to H. No. 2 cylinder and spring box in Fig. 12 have been entirely removed. There is now only one cylinder. Special mechanical arrangements must be made to turn the cylinder once every three picks.

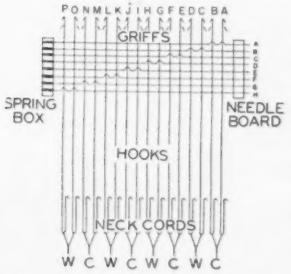

Fig. 14. A cross-section sketch showing the arrangement of needles, hooks, and griffs for the special British Jacquard motion. In this arrangement, the needles are the same as for a single-cylinder double-lift Jacquard, but the hooks and griffs are like a double-cylinder double-lift Jacquard. The drive to the cylinder is changed so that each card serves for three picks. The neck cords marked "W" indicate white pile ends and the ones marked "C" indicate colored pile ends.

Now let us consider how this special terry Jacquard will operate. First, we know that to produce a terry loop on top of the cloth the pile thread must be lifted as follows: 1st pick—lift; 2nd pick—lower; 3rd pick—lift. To produce a terry loop on the underside of the cloth the pile thread must be lifted as follows: 1st pick—lower; 2nd pick—lift; 3rd pick—lower. If a hole punched in the Jacquard pattern card is presented to needle A, the hook A will be engaged by the griff. The griff rising will lift the hook and the thread so controlled. That is for the 1st pick. Thus the pile thread is lifted.

The same pattern card presented for the second pick will find the griff under hook B rising. But this hook is turned the opposite way to hook A. As the same punched hole in the pattern card is still there, as for the 1st pick, and hook B is also controlled by needle A, the hook B will not be engaged by its now rising griff. The griff under hook A is now descending. Hooks A and B both control the same pile thread, being connected by a tug cord. Therefore the pile thread is not lifted. It is lowered.

For the third pick, the same punched hole in the pattern card is again presented to needle A. The hooks and griffs are again as in the first pick. Hook A is lifted by the rising griff. Therefore, the pile thread is lifted.

The complete weave cycle for a terry loop on top has been accomplished. 1st pick—pile thread lifted; 2nd pick—pile thread lowered; 3rd pick—pile thread lifted. But if instead of a hole in the card being presented to needle A for the three picks, a blank were presented, the reverse lifting would have been accomplished and the terry loop would have been underneath and not on top.

If we still desire that the terry loop from the same pile thread shall again be on top of the cloth for the next cycle of terry weave, namely the fourth, fifth, and sixth picks, then this time we shall have to present a blank in the card and not a punched hole, because this time the griff under hook B will be rising. In order that hook B shall be engaged by its griff it is necessary to push the needle A. This necessitates a blank in the pattern card. A little thought will show that this will cause the pile thread to be lifted-lowered-lifted, during the three picks that the second card was presented.

Painting and Cutting Instructions and Selection of Design Paper for the British Special Terry Jacquard

Suppose that we wish to weave a reversible two-tone terry pattern with equal number of loops on each face of the terry towel. The pattern is brought out by interchange of color and white pile loops.

Suppose that we decide to use a 28-dent reed and 48 picks of filling per inch. The cloth is to be bleached after weaving. The shrinkage from yarn spread in the reed to woven cloth width, and again the further shrinkage of width due to the bleaching process, will give us 32 pile threads per inch. 16 of these pile threads will show on the face of the cloth and 16 will be underneath. 48 picks per inch of cloth equal 16 terry loops, because 3 picks are needed to produce one terry loop lengthwise in the cloth. Therefore, we need design paper in the proportion of 16 to 16. Keeping to these proportions, we should use 8x8 paper, if using a 400 Jacquard, or 12x12 paper if using a 600 Jacquard. Each square would then represent 2 pile ends—one on top of the cloth and one underneath. The same square length-wise represents 3 picks or one terry loop. The full horizontal line of squares would be cut on one card, this card serving for 3 picks.

The pattern painted in color on the design paper conforms to the design to be produced on the face side of the cloth. Such design in this case is to be colored loops on a background of white loops. Where no color is to show on the face of the cloth the design paper will not need to be painted.

Each square represents two pairs of hooks in the Jacquard. These two pairs of hooks control two pile ends, one pile end for the face, and one pile end for the loops on the underside of the terry cloth. If the first square was painted, then we should cut a hole and leave the next position blank. The hole would cause hooks A and B which control a colored pile end (see Fig. 14) to weave a colored loop on top. The blank would cause hooks C and D, which control a white end, to weave a white loop underneath.

Now bear in mind that the next row of squares (horizontally) which is to be cut on No. 2 card, must be cut in the opposite manner to that for No. 1 card because the opposite griffs will be rising for the first and third picks.

Cutting is greatly simplified if the squares vertically are numbered 1-2-3-4, etc.

Cut all odd numbered lines first.

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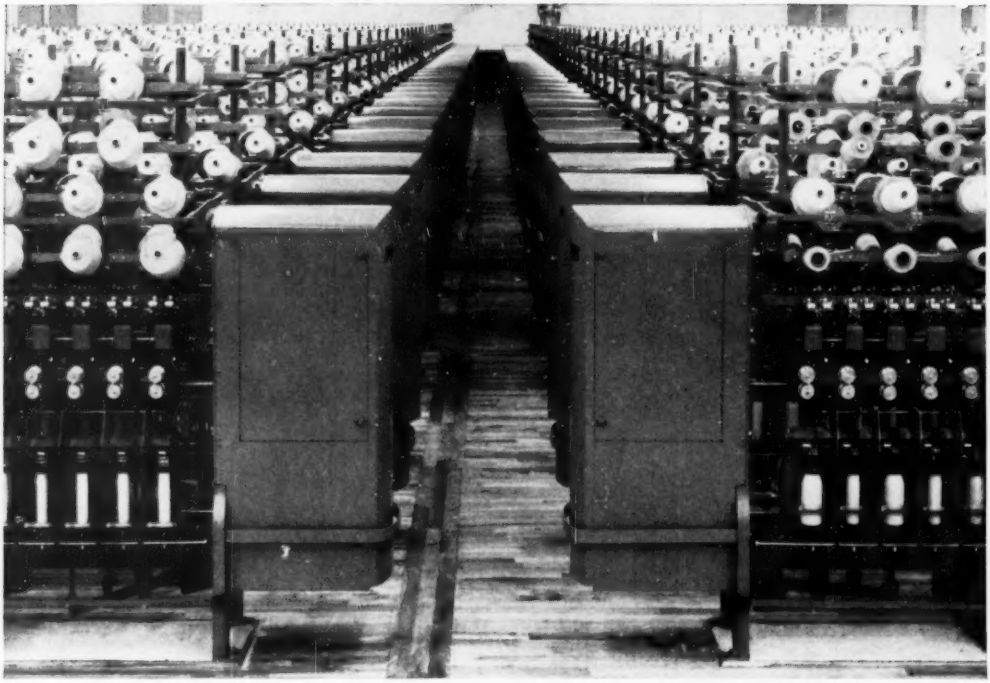

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If color shows on the design paper, cut a hole, then leave a blank. If white shows (that is, unpainted), leave a blank first, then cut a hole. Continue until the whole pattern is cut, but only cutting every alternate line, namely the odd numbered lines. Then start again at the top of the design paper. This time cut the even numbered rows. But if color shows this time, leave a blank first, then cut a hole. If white shows, cut a hole, then leave a blank.

Now lace the cards in order 1-2-3-4, etc., that is, first a card from the odd numbered cards and then a card from the even numbered cards.

In the case of blocks of terry contrasting with blocks of no terry (tapestry-like type of terry), the painting and cutting instructions are simpler. Odd numbered cards—cut two holes for each square where painted. Leave two blanks for each unpainted square. Even numbered rows—leave two blanks for each painted square. Cut two holes for each unpainted square.

The ground threads are carried on heddles which are operated by cams on the loom. Bars of cloth for borders without loops are obtained in the usual manner by manipulation of the terry motion so as to beat up every pick, instead of three picks as for terry loops.

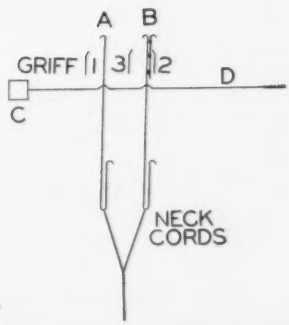


Fig. 15. Diagram showing the operation of the special terry Jacquard mechanism. A hole in the card is presented to the needle (D) thus allowing the needle to project into the cylinder (C). The end will be lifted on the first pick as the single hook (A) is lifted by Griff No. 1; left down on the second pick as Griff No. 2 fails to catch the double hook (B); and, lifted on third pick as the double hook is lifted by Griff No. 3.

The American Special Terry Jacquard

This type of Jacquard specially built (by C & K) for weaving terry cloth, like its British counterpart, has each pattern card serving for three picks. It also has a special rearrangement of hooks.

It works not on the double lift principle, but on a triple lift, having three griffs instead of two. But as regards the joining together of the tug or neck cords, the principle is as for a double lift. The three griffs are set to work at 120 degrees apart, giving three separate lifts.

Only one cylinder is used. The drive is from the crank shaft of the loom by means of a chain to an overhead Jacquard drive. The overhead drive consists of bevel gears and three eccentrically driven lifting rods which have Randall joints. The three griffs are raised and lowered by fulcrumed cast iron arms, which in turn are operated by the eccentrically driven lifting rods, which also are adjustable to suit the amount of lift so desired. All these overhead connections are at the right hand side of the loom when viewed from the front, thereby eliminating most of the danger of oil drips falling on the cloth.

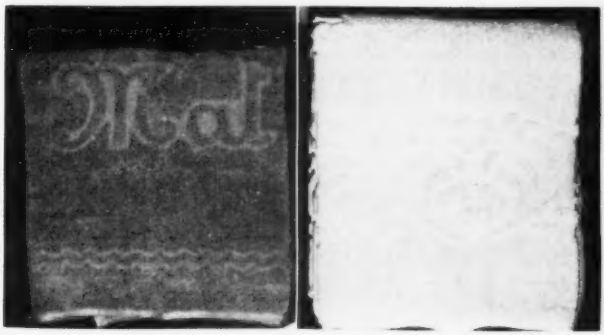
The movement of the second griff operates the card cylinder in addition to its other duties. The card cylinder is at the left hand side of the loom, and the cards hang clear of any mechanism. In addition to the card savings effected by having one card serve for three picks, this Jacquard is also fitted with repeater mechanism which enables the same card to be used for weaving as many terries of that particular pattern as desired. It is a valuable card saver when weaving designs which have considerable plain terry in them, such as in name towels.

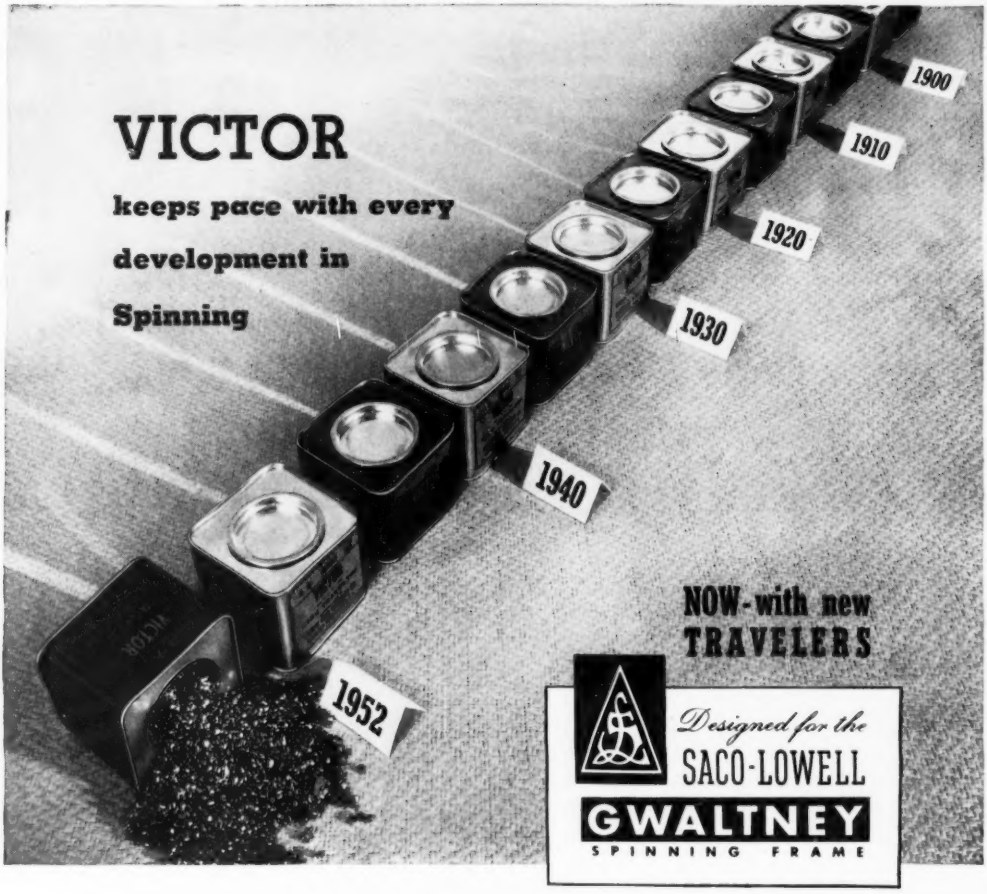
The principle in the operation of this Jacquard is the well known fact that the lift of the pile ends is the same for the 1st and 3rd picks of the terry weave, while the lift for the 2nd pick is the reverse of the first and third. Thus a terry loop on top has the pile and lifted-lowered-lifted for the three picks forming the terry weave cycle. A terry loop on the underside is the opposite—lowered-lifted-lowered.

Fig. 15 shows the arrangement of hooks and needles in this machine. Note that one of the hooks is a double hook. The double hook is formed by soldering 7 inches of another hook, turned opposite, to the top of the long hook. The full length of the hook is about 33 inches. All double hooks raised by the 2nd griff cannot be raised by the 3rd griff, but all of these double

TUB MAT AND SPECIAL TERRY. Left, the tub mat (full harness Jacquard) woven on C&K special terry Jacquard; one card serves for three picks. Towel is woven white and piece dyed. 2 and 2 system of drawing.

Right, the special terry Jacquard. 624 hooks where one card serves for three picks. Cloth is in loom state. 2 and 2 system of drawing used.





One of the principal objectives in the design of the Gwaltney Spinning Frame was the establishment of conditions under which higher traveler speed would be practical. It was recognized that, under these conditions, specially designed travelers would be required to take full advantage of the new speed potential.

At the request of Saco-Lowell, Victor's research staff cooperated fully in the necessary experimentation to develop travelers exactly suited to the need. The result is the Victor X2D — Half Round Wide series, which are geared to the high duty requirements of the Gwaltney frames. Complete information regarding their most efficient use is available from any Victor Service Engineer or sales office.

Once again Victor has devoted its experience and special abilities to a significant development in spinning machinery. Victor will continue this same friendly service to *all* textile machinery manufacturers, taking part in the achievements of the future, as it has in those of the past and present.

As recognized Traveler *specialists*, Victor Service Engineers can help you keep your production and quality "a step ahead". Write, wire, or phone the nearest Victor office.

•

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hooks not raised by the 2nd griff will be raised by the 3rd griff.

The three griffs have an approximate movement of 5½ inches to allow an approximate lift of 3¾ inches to the hooks.

3¾"—lift of hook
1¼"—one third the lift of the hooks to allow a one pick dwell
½"—clearance between hooks and griffs to allow time for proper indication

5½"—total

The extra travel of 1¼ inches by each griff is *below* the hooks, after the hooks have been rested on the bottom plate; thus a one pick dwell for each griff. Fig. 16 shows the position of the needle and hooks when a blank in the card is presented. Fig. 15 is in the position when a hole in the card is presented.

Now let us follow the operation of the machine to find out how one card can be made to serve for three picks. By referring to Figs. 15 and 16, A is a single hook. B is the double hook. C is the cylinder. The needle is shown at D. Fig. 15 shows hole in card presented to needle.

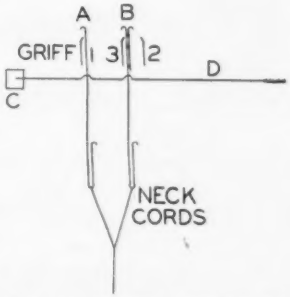


FIG. 16. Diagram showing the operation of the special terry Jacquard mechanism when a blank in the card is presented to the needle (D), thus keeping the needle from projecting into the cylinder (C) and pushing the hooks backward. The end will be left down on the first pick as the single hook (A) fails to catch on Griff No. 1; raised on the second pick as the double hook (B) is lifted by Griff No. 2; and, left down on the third pick as the double hook fails to catch Griff No. 3.

1st pick—Griff No. 1 rises, engages single hook, and lifts it.
2nd pick—Griff No. 1 lowers, lowering single hook. Griff No. 2 rises, but does not engage double hook.
3rd pick—Griff No. 2 lowers; Griff No. 1 remains down. Griff No. 3 rises, engages double hook and raises it.

Therefore the pile threads controlled by these hooks have been lifted-lowered-lifted which is the weave cycle for a terry loop on top of the cloth.

Fig. 16; blank in card presented to needle.

1st pick—Griff No. 1 rises, does not engage single hook.
2nd pick—Griff No. 1 lowers; Griff No. 2 rises, and engages double hook, raising it.
3rd pick—Griff No. 2 lowers, lowering double hook. Griff No. 3 rises, but does not engage double hook. Griff No. 1 remains down.

The pile ends controlled by these hooks have been lowered-lifted-lowered, thereby completing the weave cycle for a terry loop on the underside of the cloth. Now we have established the fact that a hole punched in the card, and the card left there for 3 picks, will cause a terry loop to be woven on top of the cloth, while a blank in the card produces a terry loop on the underside.

Selection of Design Paper, Painting the Pattern, and Card Cutting Instructions for C & K Special Terry Jacquard

Suppose that we wish to weave a reversible two-tone terry pattern of identical quality as that for the British special terry Jacquard, then we need 8 x 8 design paper if for a 400 Jacquard or 12 x 12 if for a 600 Jacquard. Each small square again would represent 2 pile ends —one on top of the cloth and one underneath. The same square lengthwise represents 3 picks or one terry loop. The full horizontal line of squares would be cut on one card. This card serves for 3 picks.

The pattern painted in color on the design paper conforms to the design to be produced on the face side of the cloth. Such design is to be colored loops on a white background of loops. Where no color is to show on the face of the cloth, the design paper will not need to be painted. Each square represents two pairs of hooks in the Jacquard. These two pairs of hooks control two pile threads, one pile thread for the face and one pile thread for the loops on the underside of the terry cloth.

If the first square is painted, then a hole should be cut and next position left blank. The ends are drawn—first a color, then a white —throughout the harness. But if the square is not painted, first leave a blank, then cut a hole.

In this Jacquard it is not necessary to reverse the order of cutting for odd rows against even numbered rows as when cutting for the British system. All rows have the same system for card cutting. Should the pattern be blocks of terry contrasting with blocks of no terry (tapestry type of pattern), the cutting instructions are more simple.

Cut 2 holes for each painted square. Leave 2 blanks for each unpainted square. All rows to be cut on this system. The ground threads are controlled by heddles operated by cams on the loom. The terry motion operates to produce terry loops or without terry loops according to the demand of the pattern.—The End.

Less Waste to Pollute Streams

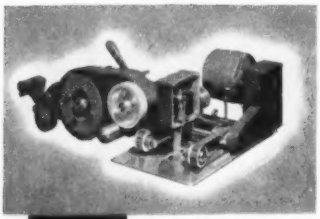
R. H. Souther, Cone Mills Corp., recently reported that progress is being made in efforts to decrease stream pollution from textile wastes by cutting down the amount of chemicals used in dyeing. A number of raw stock samples dyed in the laboratory seemed to promise good dyeing with far less dyestuff.

Cone Mills have been successful in their efforts to reduce dye wastes, and the use of instruments, such as those used in the Marhen Process, may show the way toward a material reduction of the amount of chemicals used in wet processing.

SAVE UP TO 50% . . . OF PRODUCTION COST

produce superior fabrics

The McCreary Continuous Process† is the most advanced electronic and mechanical process for finishing nylon and other synthetic tricots or woven fabrics, and is the only complete vertical set-up of tenter frame, automatic feed, jet type dryer and setting unit.

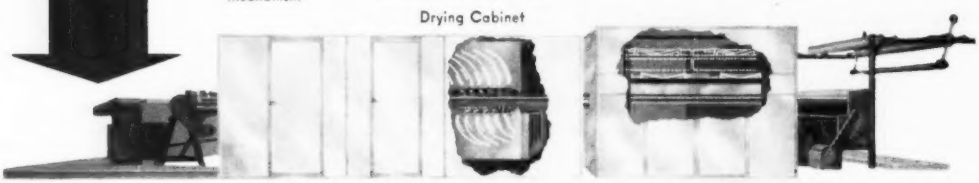


Close-up feed mechanism

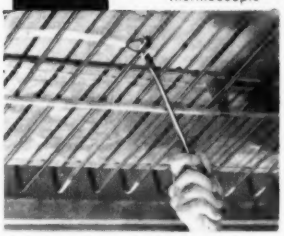
McCreary Automatic Pinning, Overfeed

A new system providing definitely greater and fully controlled yields. It gives positive and accurate control of the feeding, which cannot be done by hand, and does it as accurately for tricots as for woven fabrics. The new supersensitive guider fingers with electronic controls and Dynamic Braking* permit very close accurate edge pinning of the finest cloth. Fabrics of any width can be handled automatically without distortion or stretching of the edges. By use of this feed, labor costs are substantially reduced.

Drying Cabinet



Calrod heaters and thermocouple



McCreary Electro-Setting

The electronic method for permanently setting nylon and other synthetic tricots after dyeing and while still on the tenter frame. The result is cloth superior in dimensional stability and hand. Radiant heat provided by G-E Calrod* tubular heaters, controlled by G-E Reactrol*, gives a temperature range to 1500° and produces uniform stepless heat. While the tenter frame is not in motion or when fabrics not requiring setting are being processed, the electro units are automatically raised. The average operating costs are only 50c to $1.00 per hour.

These units may be obtained individually for attachment to existing tenter frames.

Completely equipped with G-E heaters and controls

*Reg. US Pat. Off. †Patents applied for

Send for free illustrated brochure on McCreary Continuous Process.

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Dyeing Acetate with Naphthols

Mill procedure for package dyeing acetate yarns with naphthol colors. Wash and light fastness better than that obtained with acetate dyes.

By **WILLIAM R. IVEY**
Tennessee Eastman Company

A PRACTICAL method for package dyeing acetate yarns with naphthol colors has been developed to make possible the production of yarns with greater wash fastness than that provided by the acetate dyestuffs. See accompanying box for naphthol and color base combinations to produce shades indicated.

To prepare naphthol solution: paste 1 part naphthol with 2 parts denatured alcohol and ¼ part caustic soda dissolved in 2½ parts of water added very slowly, while stirring, until in solution. Add 2 parts non-ionic dispersing agent. Add this to 25 parts cold water, stirring constantly (note: with Blue 2B Base, use hot water—160 F).

Mill Procedure. Fill machine with water; add 1% synthetic detergent. Strain naphthol solution (prepared as previously described), pour in, and circulate well.

Enter yarn packages dry, close machine, and begin circulation cycle (10 minutes inside-out; 5 minutes outside-in). Raise temperature to 120 F; run for 10 minutes.

Add strained prepared color base; raise temperature to 160 F and add mono sodium phosphate (½% for filament yarn, 1% for spun). Run for 30 minutes.

Drop bath; rinse for 10 minutes with cold water containing 20% common salt; then rinse for 5 minutes with cold water.

Fill machine again; start circulation inside-out. Heat to 120 F; add diluted hydrochloric acid and dissolved sodium nitrite as follows: for yellows, oranges, browns, scarlets, reds, bordeaux, and blacks, use ¾ oz/gal hydrochloric acid and ⅜ oz/gal sodium nitrite; for blues, 1/10 oz/gal hydrochloric acid and ¼ oz/gal sodium nitrite. Raise temperature to 160 F; diazotize for 15 minutes; drop bath and rinse with cold water for 5 minutes.

Refill machine and heat to 120 F. Add ½ oz/gal soap, 1/16 oz/gal soda ash, and ⅛ oz/gal pine oil for all shades except blues (note: for blues use ½ oz/gal non-ionic and ⅛ oz/gal pine oil). Raise bath to boil and soap for 15 minutes. Drop bath and rinse for 10 minutes at 160 F, followed by cold running rinse for 5 minutes. Remove packages, extract, and dry.

Light fastness of 40-100 hours may be obtained on dyeings carried out by this method, depending on the naphthol and base combination utilized. Excellent fastness to AATCC No. 3 cotton wash test may be obtained. Cost, dyeing time, materials handling, and amounts of dyes and chemicals compare favorably with same shades run on other fibers.

TABLE I

Combination for Shades on Acetate Yarns

All of these combinations have been run on a practical basis and possess the good fastness to light and washing required for certain types of finished goods.

Yellows
Naphthol ASG
Fast Red B Base
Naphthol ASG
Fast Red KB Base

Orange
Naphthol ASD
m-Amino Benzo Trifluoride
Naphthol ASBG
Fast Orange R Base

Scarlet
Naphthol ASD
Fast Scarlet R Base

Red
Naphthol ASD
Fast Red B Base
Naphthol ASD
Fast Red PA Base

Bordeaux
Naphthol ASD
Fast Garnet GBC Base

Brown
Naphthol ASLB
Fast Red B Base
Naphthol ASLB
Fast Red PA Base
Naphthol ASLB
Fast Garnet GBC Base

Blue
Naphthol ASD
Fast Blue 2B Base

Navy
Naphthol AS BG
Eastman Diazo Black RK

Black
Naphthol ASD
Eastman Diazo Black RK

Before the Feb. 2 meeting, Piedmont Section, AATCC.

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The Keever aim for many years has been to keep Victor Mill Starch at unvarying top quality.

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• Letters to Editor • Technical Discussion •
• Manufacturing Briefs • Kinks & Shorts Cuts • Comments from Readers •

The articles appearing in this department, like those in the feature section on which the "Exclusive" symbol appears, were prepared exclusively for TEXTILE INDUSTRIES.

Kinks are paid for at regular space rates, and an additional $100 is awarded the winner in each contest. See announcement at bottom of this page for details of current contest.

Industry Needs "Textile Standard Data Handbook"

EDITOR TEXTILE INDUSTRIES:

I have read your article on "Unit Work Standards and Job Assignment Practices" [January 1952] by George E. Tucker and Osbert Hughes.

You are to be highly complimented on your desire to make a real contribution to the field of Textile Industrial Engineering. There is a real need for fundamental information. Practically all published material on time study (in book form) has been devoted to the metal working industries and the time is ripe for down-to-earth material for the textile industry.

The compilation of standards obtained from various mills may be interesting but, I believe, of very little value to industrial engineers, since the conditions differ from mill to mill and job contents are not identical. In the past it has been the practice too often to find out what some other plant is doing and adopt comparable standards. I could give you some good examples of that from my experience.

What the industry needs foremost is a Textile Standard Data Handbook.

This book should contain discussions of the following items.

1. Basic concepts of work load assignments
2. Equipment used in Industrial Engineering
3. Basic calculations of machine production
4. Methods of calculating production standards in each department
5. Elemental standard data
6. Bibliography

Under "basic concepts of work load assignment" the subject of operator rating, fatigue, delays, etc., should be discussed since they are fundamental to work standards. To ask the industry through questionnaires whether they consider these items in setting standards is of no avail; one doesn't have a standard without consideration of them.

The question regarding how "frequencies on ends down—loom stops, etc." are obtained is of no value since there is no answer to this problem in any mill without actual study followed by calculation.

The problem concerning machine interference should not be a subject in the questionnaire. There have been developed mathematical formulas covering the interference problem. It only remains for the industry to be informed as to its application.

The problem which you have set out to solve for the textile industry is one which is vital, and if you do a job it will be a real service. However, I am convinced that it cannot be done by questionnaire. The job requires the organizing efforts of one man with a knowledge of industrial engineering as applied to other fields who can summarize the best procedures now being used both in textiles and other industries. He will need to meet with the industrial engineers

KINK CONTEST!

15 minutes of your time may be worth $100

This contest ends July 15, 1952.

EVERY kink, short-cut, time-saver, or quality improvement suggestion entered in the contest will be paid for immediately upon acceptance. The $100 award will be made as soon as all entries are received.

The contest rules are simple:

All contributions must be postmarked not later than midnight, July 15, 1952.

A photo or rough sketch will make your entry more valuable, but if you don't have either, send us your kink anyway.

Send your contest entry to: Editor TEXTILE INDUSTRIES, 806 Peachtree Street, N. E., Atlanta 5, Georgia.

of other plants to evaluate the data he has to work with if it is not to include a lot of chaff.

Obtaining data from a few well chosen companies will be valuable, but averaging or tabulating data from companies which have no competent engineers (and they are legion) will be a waste of effort.

I trust you will accept my comments in the spirit of helpful cooperation as they are intended and that they may lend encouragement to the bigger project.

HOLGER D. OLEEN
Industrial Engineer
Monument Mills, Inc.
Housatonic, Mass.

◆

EDITOR TEXTILE INDUSTRIES:

We have just completed our reading of the January issue of TEXTILE INDUSTRIES, and of course, we enjoyed reading it very much. We can truthfully say that TEXTILE INDUSTRIES has shown a marked improvement over the years, and we now find it is worth our while to at least casually read all of the articles instead of just picking those which caught our eye in the Index.

The prime purpose of this letter, though, is concerning the survey which was made on Unit Work Standards and Job Assignment Practices. Our personal feeling is that more work of this type done by a magazine such as yours would prove very beneficial to the mill. We agree very thoroughly with you in that no comparison of job loads can be made, but a basic common denominator can be arrived at which will enable everyone to possibly check his situation to determine if the standards are in line with other mills.

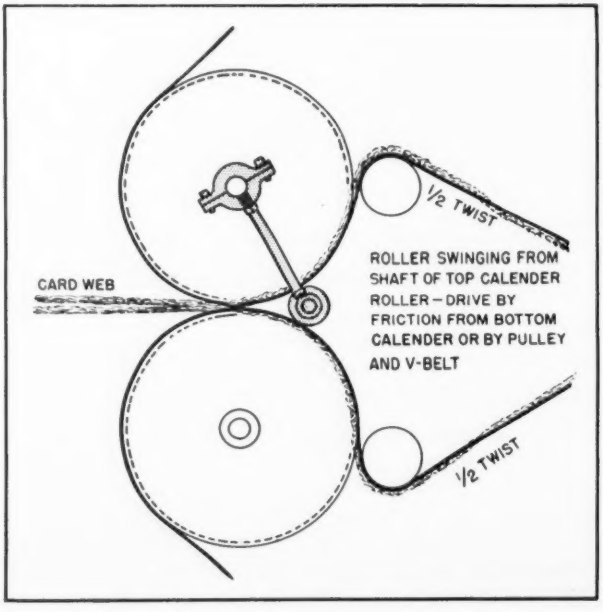
As the industry becomes more and more competitive, which is no doubt ahead of us, it is going to be of the utmost importance that everyone obtain the best possible elements for determining job load. A standard, while it does not give a direct comparison, does give a basic starting point for the determination of job loads and will assist anyone using it materially.

While all of us have devoted a lot of time to machine improvements, to job assignment, etc., the impact of the Time and Motion Studies has not fully been reached, and it is the writer's personal opinion that before long every mill will have a large industrial engineering department whose sole duties will be to check all elements of cost such as those pointed out in your article.

We definitely feel there is a need for articles of this type which will at least put all of us to thinking about ways and means of lowering our unit cost.

CONTRIBUTOR No. 8458
(Superintendent)

Roll Prevents Ends Down on Wool Condenser


1/2 TWIST
ROLLER SWINGING FROM SHAFT OF TOP CALENDER ROLLER—DRIVE BY FRICTION FROM BOTTOM CALENDER OR BY PULLEY AND V-BELT
CARD WEB
1/2 TWIST

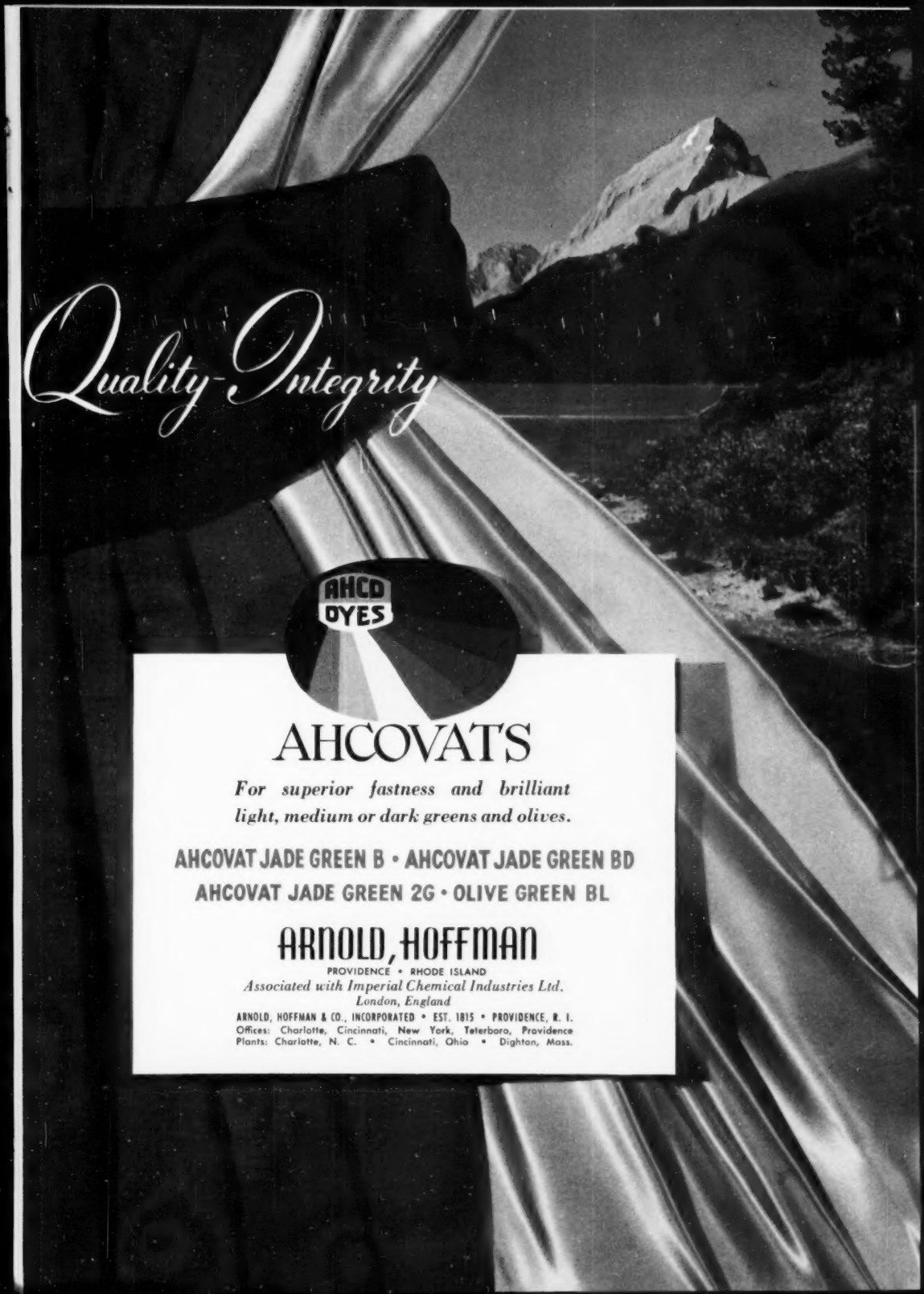
EDITOR TEXTILE INDUSTRIES:

Many carders at some time or other have had trouble when condensing long wools on a shallow groove condenser. The long fibers cause ends down in the condenser in that fibers interfere with the small sliver on the accompanying tapes. The difficulty is sometimes called "robbing."

We had the forementioned difficulty in carding long crossbred blends on a 180-thread endless tape—essentially the same design as the shallow groove type. We found that by inserting a small roller immediately behind the dividing rolls (see sketch) we were able to overcome the difficulty satisfactorily.

The problem and solution should be of interest to carders of coarse wools and synthetics, and makers of carpet yarns.

CONTRIBUTOR No. 8440



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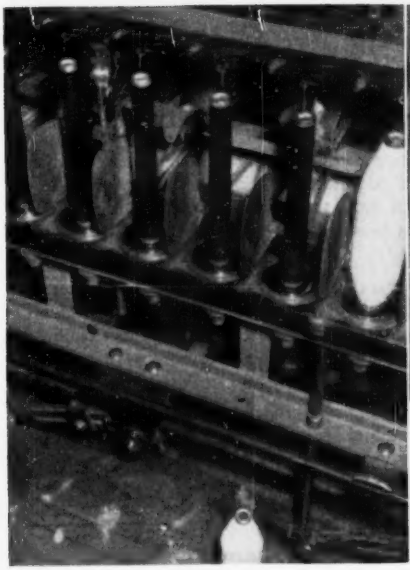
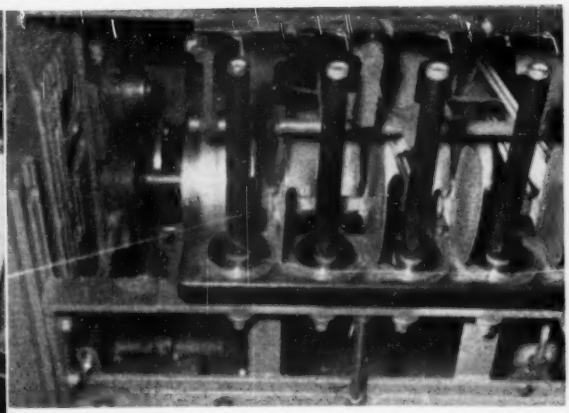
Method for Putting Up Ends Quickly After Scouring Spinning Rolls





BOBBIN full of yarn on the floor supplies yarn which is threaded through the travelers as shown at left. Above, the end is ready to be looped around the last bobbin in the usual way.

EDITOR TEXTILE INDUSTRIES:

In spinning we found considerable time was consumed for putting up ends after a breakdown or after scouring.

I devised a method which requires about one third of the usual time consumed in putting up ends. After a breakdown or scouring we run the ends through the rolls enough to present a clean and adequate sliver to piece to. Then we take out the scavenger rolls and ascertain that the sliver is about half an inch long. After cleaning off the scavenger rolls and laying on the finger boards, we wind up the machine in the usual way, set it ready to run, place a bobbin full of yarn on the floor, and thread the end through the travelers (see illustrations).

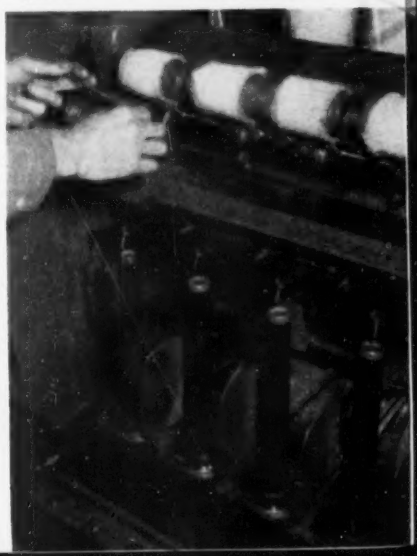
After the yarn has been threaded through the travelers, the end is ready to be looped around the last bobbin in the usual way. The operative starts piecing and works back to the spindle where the yarn was placed through the first traveler on the frame. The procedure is followed on other sections (usually about 20 ends) until all ends are up.

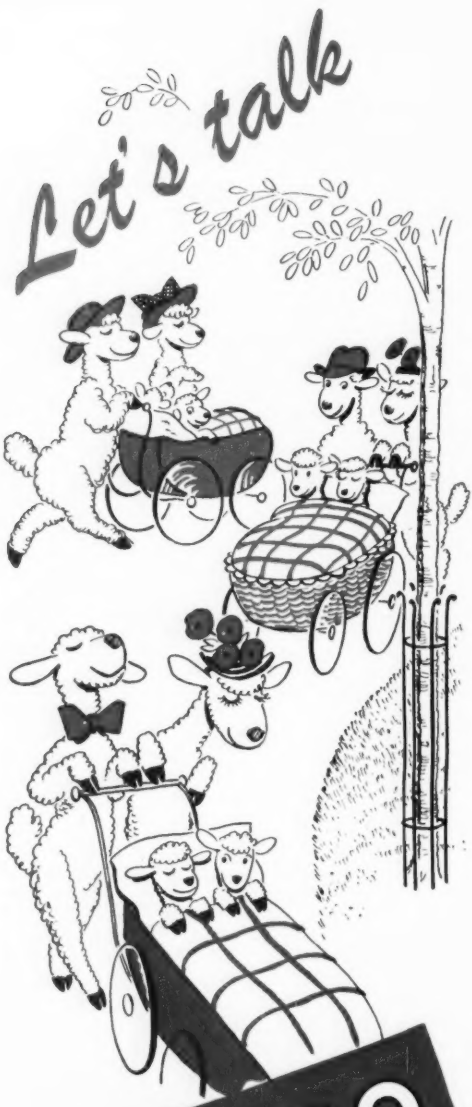
The next step is to replace the scavenger rolls and start the machines. By performing the operations in the sequence described, there are no scavenger rolls to be cleaned after the ends are up; therefore the yarn does not become spotty, lumpy, or contaminated as it would otherwise.

One of the illustrations shows how the side pieces are spliced in the usual way without a bobbin under the arm or chin. The method is simple, easy to apply, and there are less wasted movements than other methods require.

CONTRIBUTOR No. 8413

PIECING is done as usual, and the operative works back to the spindle where the yarn was placed through the first traveler on the frame. The procedure is followed on other sections (about 20 ends per section) until all ends are up.





PRODUCTION

Are you *really* satisfied with your present boarding and preboarding operations? Do you get top production of perfectly finished pairs? . . . You will with the Turbo AD-48.

Here is a dual-purpose machine for preboarding and finish boarding that has a production rate of 120 to 130 dozen pairs per 8-hour day . . . with *one* operator.

In preboarding you get unvarying production. There is no guesswork, timing is automatic. Stocking forms remain in the steaming chamber for a predetermined interval. A specially designed, gasket-sealed door maintains the desired steam pressure.

Finish boarding is done in the same chamber with fan-circulated heated air. Yet the air is not completely dry, it carries a slight trace of moisture to reduce static and make the stockings easier to handle. Air is directed at welt and toe to insure completely uniform drying.

Two groups of 24 forms each, operate on a collapsible "spider." There is no jolting or banging to injure delicate threads, action is gentle as a lamb. Leg forms remain upright, fabric will not creep. Forms stop with ample spacing between, and at a precise angle calculated for maximum speed in dressing, stripping and inspection. Forms are easily changed, you can run two sizes at one time. Operation can be automatic or semi-automatic, geared to the operator's production rhythm.

Why not get all the facts? Write today for the complete Turbo story on boarding and preboarding . . . it's yours for the asking.

TURBO MACHINE COMPANY
Lansdale, Pennsylvania, U.S.A.
Southern Rep.: F. W. Warrington Co., Charlotte, N. C.

Nut - Washer Prevents Damage on Loom Reed

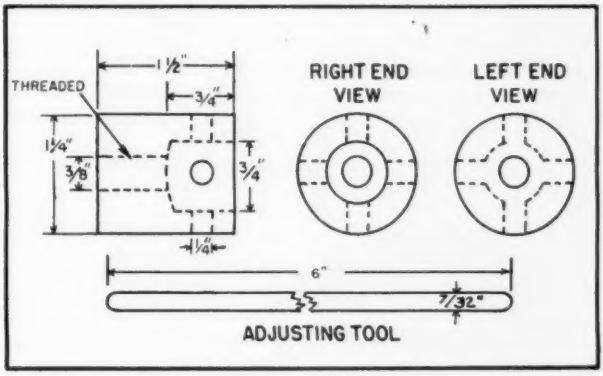
This item was submitted in a recent kink contest.

EDITOR TEXTILE INDUSTRIES:

Many times I have walked through weave rooms to find the ends of the reed caps splintered and damaged. The damage is usually inflicted by fixers striking the wing nuts with a hammer. The wing nuts hold the reed cap in place with the lay swords. Sometimes fixers place the wrong size nuts on the bolts at the reed caps.

Many fixers have lost valuable time running back and forth looking for wrenches that will fit the nuts that careless men have used. And when the correct wrench is found, the bolt has been so badly marred by the hammer that it has to be chiseled off.

The accompanying diagram shows a combination nut and washer with four holes drilled through the end. A simple tool for adjusting the combination nut may be made of ¼" cold rolled steel, rounded at the ends, and about six inches long.



The combination nut and washer is made from 1¼" cold rolled steel threaded part way through with a larger hole drilled at the back to facilitate the use of the wrench. We have found that the change saves much time, not only in manpower but also in lost production, and has been found most helpful in the weave room.

CONTRIBUTOR No. 8441

More Discussion on Variation at Drawing

Subject Briefed: CONTRIBUTOR No. 8324 *complained of variation in the weight of drawing. A 14-oz lap was used to make 65-grain card sliver. Drafts of 6 on first drawing and 7 on finished drawing produced a 55-grain sliver. Cards were stripped manually twice in eight hours. Three weighings from the same head at various times during the day showed as much as five grains difference.*

CONTRIBUTOR No. 8364 *commented that the trouble appeared to be in the method and schedule of stripping cards. He suggested a maximum stripping period of three hours, or the use of continuous strippers.*

EDITOR TEXTILE INDUSTRIES:

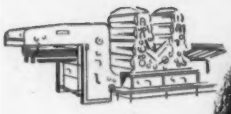
I would like to add my comments to the discussion on the subject, "Card Stripping Methods Blamed for Variation in Drawing Sliver," by CONTRIBUTOR No. 8364, appearing in the "How Other Men Manage" department of the July (1951) issue of TEXTILE INDUSTRIES.

We have continuous strippers on all of our cards and as a result never have to strip them more than once each shift. We made some tests recently on the weight of the sliver after stripping. Our test revealed that it required about 10 minutes for the sliver to regain correct weight. We are carding heavy, about 17.50 pounds per hour, making 56 grain sliver from 16.25-ounce laps.

If conditions permit, the contributor who raised the question originally may accumulate a fairly large stock of sliver from his cards and in this way get a more random supply of cans of sliver for his drawing frames.

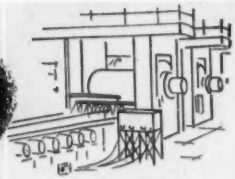
Another suggestion would be the installation of lap winders, where he could combine up to 16 card slivers for supplying the drawing. Even if he could increase the number of cans fed to his drawing from six to eight, a more even sliver would probably be produced.

CONTRIBUTOR No. 8434

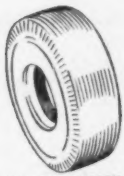


PRINTING INDUSTRY

It's the EXPERIENCE that counts...

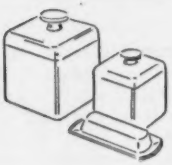


STEEL INDUSTRY



RUBBER INDUSTRY

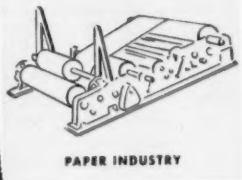
Reliance V★S is the result of nearly 50 years' experience in the engineering and application of Adjustable-speed Drives



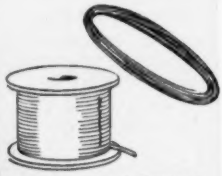
PLASTICS INDUSTRY

FOOD INDUSTRY

V★S Drive provides an unlimited range of speeds from A-c. circuits. In addition, V★S offers controlled acceleration and deceleration; slow speed for jogging, inching or creeping; fast, smooth reversal at any point desired and other specialized functions to suit particular applications. Safe, simplified control saves man hours—reduces operator fatigue. Centralized operator's station for the control of one or more drive motors can be located at any convenient point. Write today for *new* V★S Drive Bulletin D-2311.

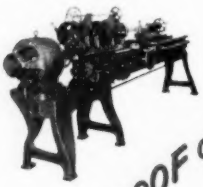


PAPER INDUSTRY



WIRE AND CABLE INDUSTRY

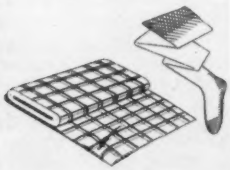
MINING INDUSTRY



PROOF of PROGRESS!

Just after the turn of the century, the lathe above made news with its adjustable-speed Reliance Armature-shifting Motor. Modern lathes (right) have built-in Reliance V★S Drives to provide control of all functions of spindle and speeds.

CHEMICAL INDUSTRY



TEXTILE INDUSTRY

METAL FABRICATING INDUSTRY

RELIANCE ELECTRIC AND ENGINEERING CO.

1085 Ivanhoe Road, Cleveland 10, Ohio • *Sales Representatives in Principal Cities*

Importance of Picker Lap Lengths Emphasized

EDITOR TEXTILE INDUSTRIES:

We have known for a long time that our pickers, although they have identical gear trains, do not produce laps of the same length. In fact, the same picker will not make consecutive laps of identical length. As an example, ten pickers, all apparently identical, produced laps ranging in length from 51.70 yards to 53.00 yards with a 52-yard knock-off gear (hunting-tooth knock-off gear).

Three consecutive laps from an individual picker measured, respectively: 52.11 yards, 52.31 yards, and 52.14 yards. Our pickers are also equipped with the pneumatic pressure system, set at 40 psi.

From previous records, established from Saco-Lowell lap meter tests, we have arrived at a standard length of 52.40 yards. The standard weight per yard is 16.35 ounces, at 7% moisture regain. Our standard lap weighs 856.74 ounces, or 53.50 pounds (actually 53.55 pounds). We allow a tolerance of plus or minus three-quarters of a pound, which amounts to about one and one-half per cent each way.

It is obvious that should a standard length lap weigh on the high side of the tolerance the average yard-to-yard weight would be one and one-half per cent heavy, while the same length lap weighing on the low side of the tolerance would be one and one-half per cent light.

Let us assume that the 51.70-yard lap weighed on the high side of the tolerance, or 53.50 plus .75 pounds, making a total of 54.25 pounds. The weight in ounces would be:

$54.25 \times 16 = 868.00$ ounces

The weight per yard would be:

$$\frac{868.00}{51.70} = 16.78 \text{ ounces}$$

The average yard-to-yard weight of the lap would be .43 ounces heavy (16.78 — 16.35), or 2.63% heavy instead of the permissible 1.50% heavy.

On the other hand, suppose that the 53.00-yard lap weighs on the extreme light side of the tolerance, (53.50 pounds — .75 pounds), or 52.75 pounds. The weight in ounces would be:

$52.75 \times 16 = 844.00$ ounces

The weight per yard would be:

$$\frac{844.00}{53.00} = 15.92 \text{ ounces}$$

According to our calculations, the average weight per yard would be about .43 ounces, or 2.63% light.

All this means that we could easily have a variation in average weight per yard of 5.25%. The individual yards within the lap may vary considerably; therefore our actual variation is doubtless quite large.

In the "old days" when our doublings were as much as 288, or in some cases 576, the variation may have been unimportant, but today when we have only six doublings, it is evident that the variation in the picker laps can hurt us.

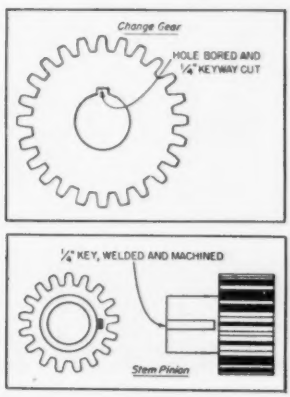
We have spent a considerable amount of effort and money trying to stabilize lap weights. We have overhauled the pickers; we have checked the gear trains, calender roll, lap or bed rolls, and we changed any gears or rolls which were not correct. The changes helped some, but we still have too much variation in picker lap lengths.

CONTRIBUTOR No. 8455

Altered Pick Gear for W-3 Looms

EDITOR TEXTILE INDUSTRIES:

A change in pick gear for W-3 looms and other looms using the same type of gear may prevent a lot of trouble with uneven cloth and repairs on take-up motion. The trouble we experienced was remedied by using a 13-tooth stem pinion with a ¼-inch key welded to pinion and machined square for the length of the stem. It is necessary to machine the change gear on side to remove projections and bore a one-inch hole. A ¼-inch keyway was cut into the change gear.



When a change of picks is necessary all that remains to be done is to drive out the pinion and drive in the correct change gear. At first glance, the alterations may seem like a lot of trouble and expense to change gears; however any weave room plagued with change gears coming out of mesh and making uneven cloth will find worthwhile relief upon changing to the altered gears. We have run the foremention gears for more than two years and find they are worth all the trouble and expense.

CONTRIBUTOR No. 8447

You can save if you take this cost-wise view

Yarn Carriers, too, are Capital Equipment

How do you regard bobbins, shuttles and other yarn carriers? Like many millmen, do you, also, think of them as incidental equipment, too low in cost to warrant much administrative attention?

Then look at a few *annual* expenditures for yarn carriers . . . $80,000 . . . $60,000 . . . $45,000 . . . enough to buy several units of processing machinery.

When you take the proper view of yarn carrier purchases, you'll find they, too, should be classed as capital equipment. And there's a real opportunity for substantial savings if you buy them with equal care to get the most for your money . . . in advanced design, in lasting durability, and in top-flight performance.

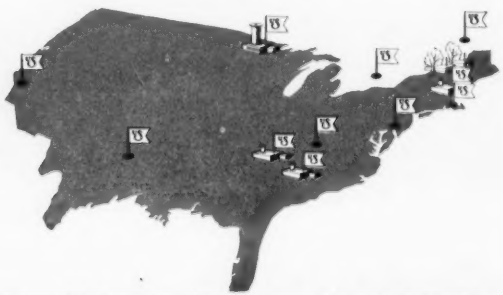
It is taking this cost-wise view that has led so many of the nation's best operated mills to standardize on U S Bobbins, Shuttles, and other yarn carriers. They know they are dealing with men who "speak their language" . . . and with a firm whose aptitude is proved by a 93-year record of leadership.

Whether you are equipping a new mill or replacing worn out carriers, talk to a U S sales representative first. You'll find it pays . . . in better yarn and fabric quality, and in lower operating costs.

U S BOBBIN & SHUTTLE CO.

LAWRENCE, MASS. PROVIDENCE, R. I. PHILADELPHIA, PA. JOHNSON CITY, TENN.
GREENVILLE, S. C. CHARLOTTE, N. C. MINNEAPOLIS, MINN.

LOS ANGELES: E. G. Poulos, 1762 W. Vernon Ave.
DALLAS: O. T. Daniel, Textile Supply Co.
CANADA: W. J. Westaway, Montreal, Que., Hamilton, Ont.



U S owned timber properties permit complete control of wood stock selection and every step in processing, from forest to finished products. Five manufacturing plants, North and South, provide ample facilities to produce and deliver promptly the cost-saving yarn carriers you need, in any quantity.

Anywhere in textile America, you are near the headquarters of a U S specialist in yarn carrier selection. He'll call at your request.

Arilan Dyes for Wool

(Continued from page 101)

round fastness, the manufacturer claims.

They are said to be suitable for dyeing a wide range of shades from pastels to deep, rich tones on loose wool or slubbing; yarns for carpets, rugs, sweaters, bathing suits and hosiery; felt for hats; woolen and worsted piece goods for sportswear, dress goods, suitings and neckwear.

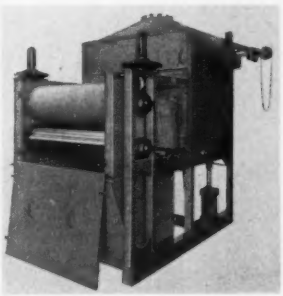
According to reports, dyes are simple to apply and no mordanting is necessary. Neutralizing of carbonized material is unnecessary; rinsing is the only predyeing treatment necessary. The products are said to build up on tone, providing better shade control. They dye level, penetrate well, and have excellent fastness to light, washing, perspiration, sea water, carbonizing and fulling.

Interchemical Corp., Hawthorne, N. J.

For additional data, request item D-109, using business reply card on page 258.

NEW Equipment AND MATERIALS

Other items are described on pages 99 and 101



Vertical Singeing Machine

This new machine for vertical singeing incorporates an automatic knock-off that functions quickly if the cloth breaks or burns. When the machine is stopped, the cloth is automatically taken off the burners.

The wet - out section is equipped with pneumatic pressure and stainless-steel and rubber-covered rolls. The wet end is guarded against splashing at speeds up to 350 ypm.

Cook-P & N Machine Co., 365 Dorchester Ave., South Boston 27, Mass.

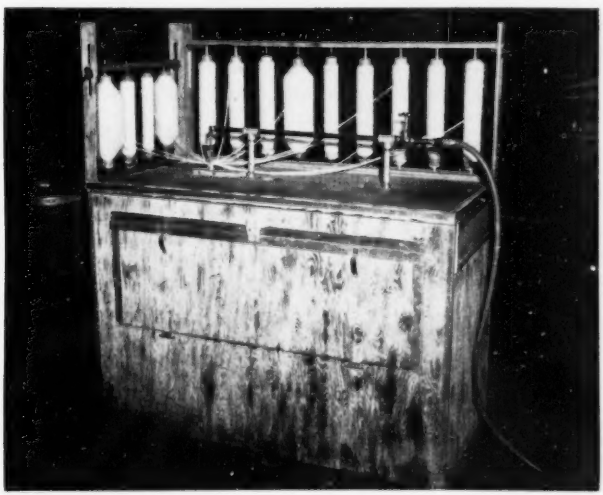
For additional data, request item D-115, using business reply card on page 258.

Device Strips Roving from Bobbins, Disintegrates It

Faster removal of roving from bobbins, without damage to the bobbins, and disintegration of roving so that fibers are not damaged and can be easily processed are advantages cited for a machine now being manufactured and sold by its inventor. U. S. Patent No. 2453603 covers the apparatus.

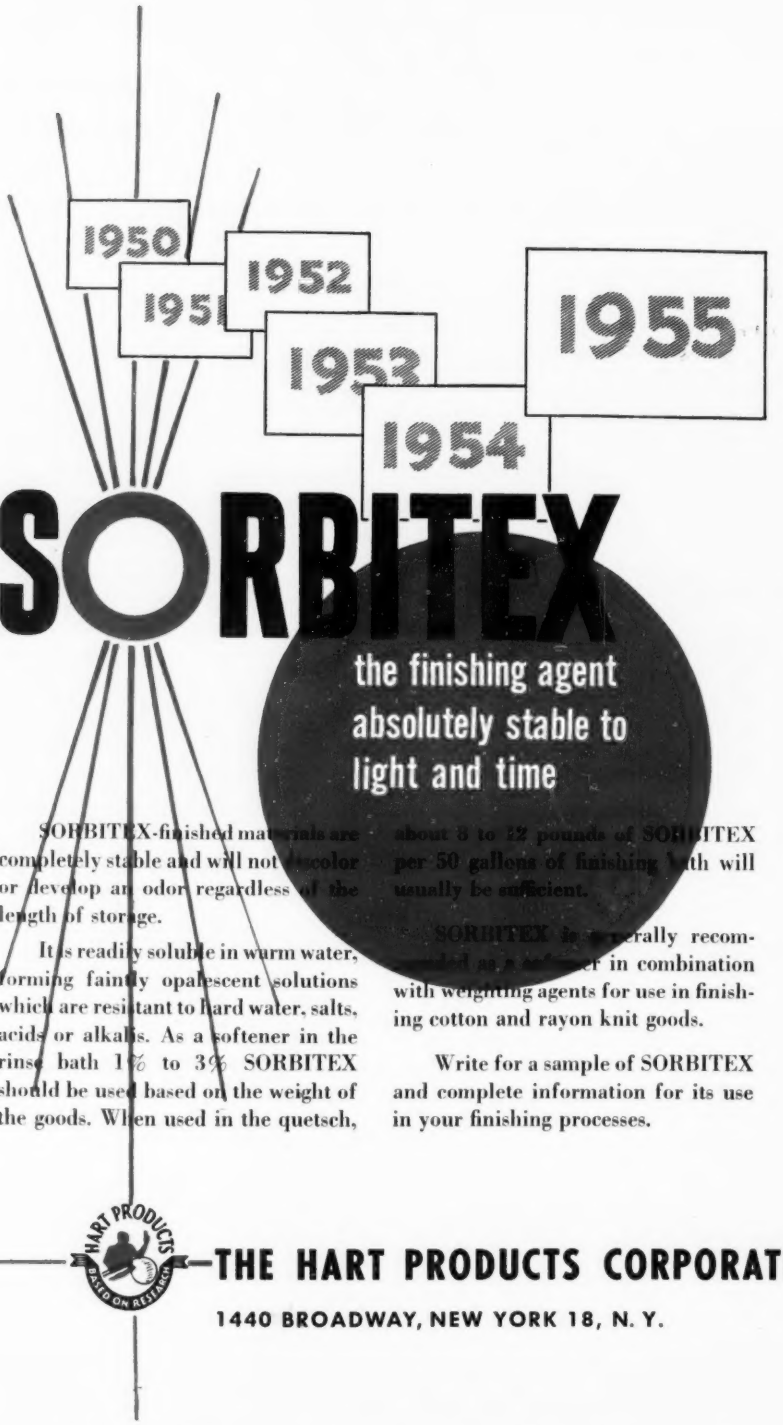
As may be seen in the accompanying photograph, the device consists of a portable box on which is mounted a creel to hold the roving bobbins to be stripped or straightened. Also mounted on stands on top of the box is a pipe, one end of which is fitted with a nozzle projecting down through a specially designed opening into the box. On the other end is a hand valve and suitable fittings for connecting the pipe to a compressed air outlet.

To start the machine, roving ends are drawn by hand from each of the bobbins and placed into the opening where the pipe nozzle projects into the box; then the air valve is opened. Roving is automatically unwound from the bobbins by air pressure. As the roving is blown into the box, it is disintegrated into a fluffy mass of such condition that it can be directly placed into a picker for reprocessing.



C. C. Sumner, P. O. Box 172, West Hillsboro, N. C.

For additional data, request item D-114, using business reply card on page 258.



SORBITEX-finished materials are completely stable and will not discolor or develop an odor regardless of the length of storage.

It is readily soluble in warm water, forming faintly opalescent solutions which are resistant to hard water, salts, acids or alkalis. As a softener in the rinse bath 1% to 3% SORBITEX should be used based on the weight of the goods. When used in the quetsch, about 8 to 12 pounds of SORBITEX per 50 gallons of finishing bath will usually be sufficient.

SORBITEX is generally recommended as a softener in combination with weighting agents for use in finishing cotton and rayon knit goods.

Write for a sample of SORBITEX and complete information for its use in your finishing processes.

HART PRODUCTS — BASED ON RESEARCH

THE HART PRODUCTS CORPORATION

1440 BROADWAY, NEW YORK 18, N. Y.

NEW Equipment AND MATERIALS

Automatic Sampling Viscometer

A new type of Viscometer automatically withdraws a small sample of liquid from a closed system, brings that sample to any desired temperature, measures and records its viscosity at that temperature, and discharges the tested sample.

Complete viscosity determinations normally made by trained technicians are obtained by this new Viscometer without any assistance from an operator, providing substantial labor saving benefits, the manufacturer states. The test samples can be as small as 25 cc, and measurements can be made as frequent as every three minutes.

This apparatus has wide application in industry, being particularly suitable for maintaining a close check on the viscosity of oil or other liquids flowing in a pipe line. It can also be used to follow viscosity changes in a batch process, indicating clearly the proper end point.

Alarms signal high and low viscosities in continuous processes. When the device is used for batch processes, one alarm can be set for the end point and the other used to indicate the approach of the end point.

The Viscometer can be furnished with automatic viscosity controlling equipment suitable for the particular application.

Norcross Corporation, Newton 58, Mass.

For additional data, request item D-801, using business reply card on page 258.

Steam Baker Exhausts All Air for Better Carbonizing and Cleaning

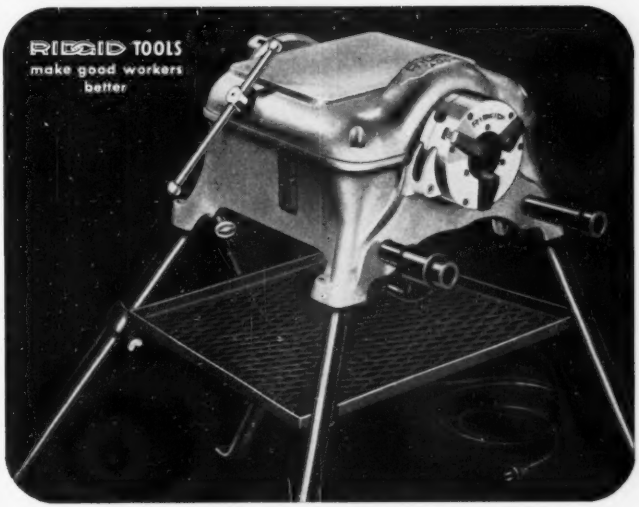
Better carbonizing and output of cleaner fabric by the new "Cleanair Steam Baker" is attributed to the fact that the machine exhausts the air used in baking 100%, taking with it all foreign matter and impurities.

The machine is divided into a series of vertical sections, the number of which varies according to requirements, with the cloth traveling over a series of rolls in vertical passes. Each section is equipped with a fin type heater and blower at the top. Sucked through the heater by the

WHY SKILLED PIPE FITTERS Demand

RIDGID

"400" PORTABLE POWER DRIVE



RIDGID *"400"—bench model or stand with tray, capacity ⅛" to 2"—to 12" with geared tools.*

Time-and-work-saving power for hand threaders, cutters, reamers

★ Extra light-weight unit—one man can handle it.

★ Lots of power—universal motor, forward, reverse, won't bog down on large pipe.

★ RIDGID design 3-jaw chuck, chuck wrench ejector; self-centering workholder in rear turns with pipe.

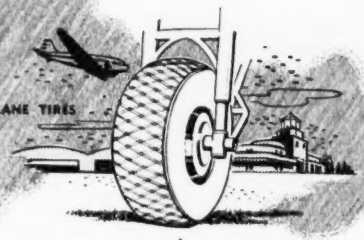
★ Sealed-in lubrication—no oil to spill.

★ See the remarkable "400" at your Supply House!

THE RIDGE TOOL COMPANY • ELYRIA, OHIO

★★★ RIDGID Work-Saver Pipe Tools ★★★

UPHOLSTERY AND DRAPERY MATERIAL



AIRPLANE TIRES

What do all these products have in common?

PARACHUTES

You don't have to analyze these products too carefully to realize that they are all products in which textile fabrics are used. What is not so evident is the fact that these and thousands of other industrial, military and consumer items like them are manufactured from plied or twisted yarns to give them greater strength, elasticity and longer wear.

To enable mills to produce the wide range of plied, twisted, or novelty yarns needed, there are more than thirty (30) models and types of twisters manufactured by Whitin. Because the proper twisting of textile fibers is an important and complicated operation, there is a Whitin twister designed especially to meet every requirement — a twister with an outstanding achievement and production record behind it.

SWEATERS AND SKIRTS

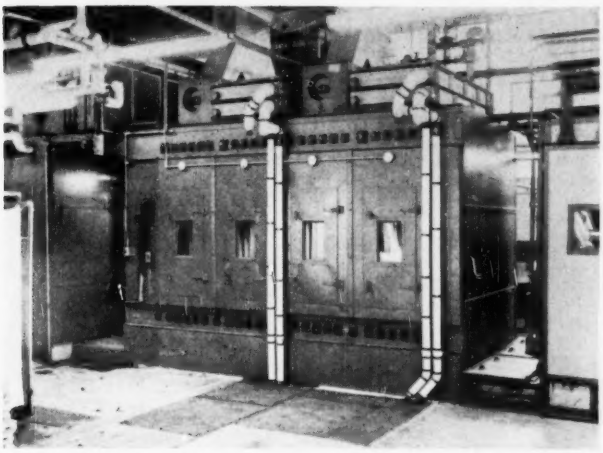
If you have a twisting problem or need, why not bring it to Whitin — largest manufacturers of twisters in the world?

Write today for descriptive literature giving complete information about Whitin twisters.

Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.



"Cleanair Steam Baker" for carbonizing range (Riggs & Lombard).

blower, air is pulled down through one section and up through the next, flowing in the opposite direction from the flow of goods. At the top of the machine the air is exhausted.

Built-in dance rolls automatically synchronize the speed of the baker with the speed of the dryer, which is set by hand. Cloth may be delivered from the unit to trucks by means of an open-width folder. Where a Riggs & Lombard continuous crusher is used, the baker delivers the cloth direct to a scray, from which it is fed to the crusher in one continuous operation.

Riggs & Lombard, Foot of Suffolk St., Lowell, Mass.

For additional data, request item D-102, using business reply card on page 258.

Pneumatic Winder Features Improved Arms and Splicers

The Simpson pneumatic winder with splicers, manufactured by Eddystone Machinery Co., is now equipped with roller bearing arms. When the roll of material builds up to the proper size, it is transferred from the back drum to the front drum for completion of the roll.

The roll, when it is transferred by means of transfer arms, falls into the new roller bearing arms for completion. After the roll is completed and the cut has been made, all the operator has to do is pull the lever on the side of the arm and the completed roll drops out of the arms.

According to the manufacturer, there is no lifting of the arm to release the finished roll from the arms and no setting of the center bar journal release after the completed roll drops—the roller arm and the release lever return to locked position automatically.

It is said that by the use of these roller bearing arms, the steel center or spitz bar does not come in contact with the rough iron casting of the arms, but the ends of the center or spitz bar operate on the steel roller bearings, thus avoiding wear or scarring.

The roller bearing arms may be used on any Simpson winder, the announcement states.

H. W. Butterworth & Sons Co., Bethayres, Pa., selling agents.

For additional data, request item D-111, using business reply card on page 258.

Electric Radiant Heater For Hard-to-Heat Places

The problem of keeping men warm when working in hard-to-heat locations both indoors and out is being solved in many cases with the new Chromalox electric radiant comfort heater, the manufacturer states. Typical outdoor operations using the

SEE C-D-F FOR FIBRE

ROVING CANS — STRONG AND SMOOTH!

For materials handling equipment specify C-D-F Vulcanized Fibre receptacles. Nothing beats fibre for economy and long life.

Material is tough and mar resistant. Trays, boxes, baskets, cans, barrels. C-D-F builds them all from light, sturdy fibre. You move materials, not useless weight.

LOOM PARTS—ALL NON-METALLIC!

Vulcanized Fibre bushings, washers, binder pins. Fibre cloth roll bearing blocks. Special parts that C-D-F accurately machines. Order by original part number and maker, or send us the old part.

C-D-F's new Southern warehouse is located at Spartanburg, S.C. Celoron gear stock always immediately available. Phone: Spartanburg 3-6397.

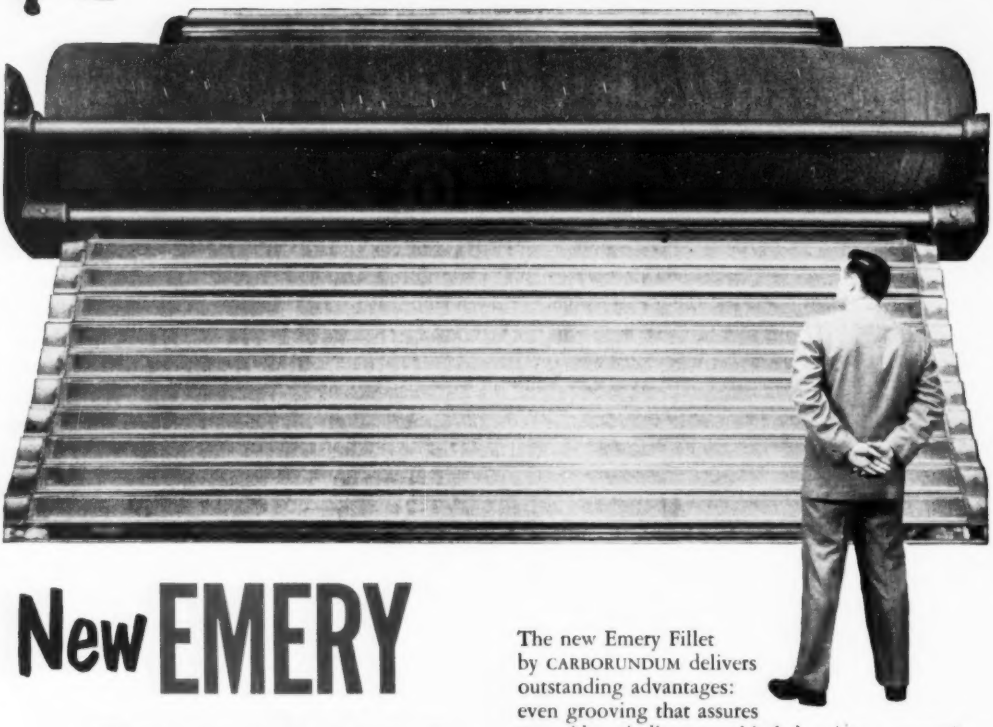
WRITE NOW! Write Textile Section, C-D-F, for catalogs showing Vulcanized Fibre receptacles, Dilecto laminated plastic materials, Celoron silent gear stock . . . all made by C-D-F to save you money. *Free 64-page booklet on machining plastics will be included!*

CDF Continental-Diamond Fibre Company

NEWARK, 11, DELAWARE

Its ease of application is exceeded only by its

SUPERB PERFORMANCE



New EMERY GRINDING FILLET

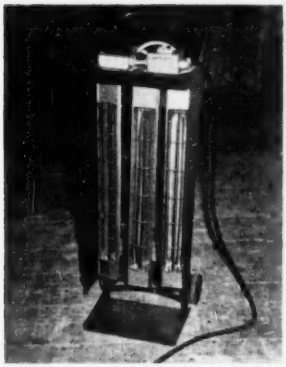
The new Emery Fillet by CARBORUNDUM delivers outstanding advantages: even grooving that assures true side grinding, no chiseled points... smooth edges that assure no gaps in the spiral winding, either on long rolls or on the traverse grinder... finest Turkish emery, securely anchored to the backing, thus assuring no shedding of particles into the grooving.

For uniform, long-life, trouble-free reconditioning of card clothing, there's no finer product made than Emery Fillet by CARBORUNDUM. Order now from your CARBORUNDUM or distributor salesman. It's immediately available.

by CARBORUNDUM

TRADE MARK

"Carborundum" is a registered trademark which indicates manufacture by The Carborundum Company, Niagara Falls, New York



Wiegand portable electric heater.

glareless all metal heaters include truck and box car loading, receiving and shipping desk work, watchmen's houses, and some maintenance jobs. The portable units can be used indoors where existing heating systems are inadequate. Can be bolted along side of machines, mounted on portable rigs, or simply laid on the floor to warm operatives' legs.

Three models available: (1) 24½" long, 800 watts; (2) 30¾" long, 1100 watts; (3) 46¾", 1800 watts. First two can be obtained in 115 or 230 volts, while latter is for 230 volts only. Protective grills and input controllers for selective heating are optional.

E. L. Wiegand Co., 7700 Thomas Blvd., Pittsburgh 8, Pa. (D-802).

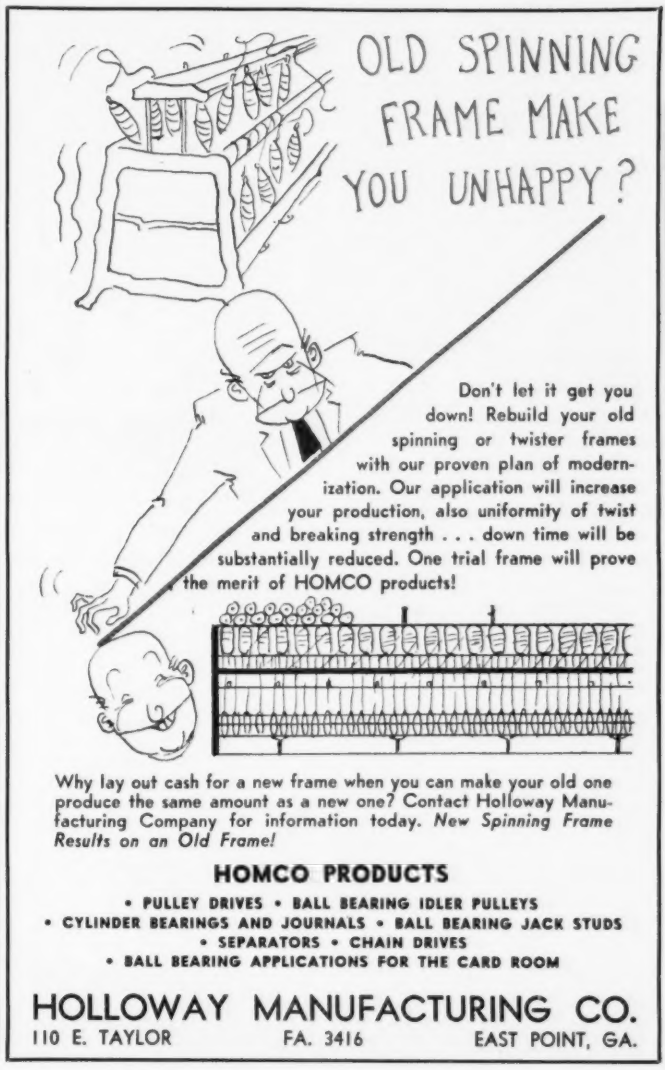
Electron Microscope Has Large Field

Screen magnification of the Philips electron microscope is continuous from 1000X to 60,000X, the manufacturer states, and the instrument is capable of producing micrograms of 30 Angstroms resolution or better. Accelerating potentials of 40, 60, 80 and 100 kilovolts are available. For rapid determination of exact focus, a beam oscillator is provided, eliminating the necessity for a series of exposures with conjunctive time loss. A through focal series is readily obtainable by means of an additional fine focus control, it is claimed. The unit has an extremely large field and permits recording in a single photograph areas which might otherwise require a mosaic of six individual sections. A roll film camera is employed, using standard 35mm high contrast film, permitting up to 40 exposures at one loading and allowing grain-free enlargements to 12X or better.

Research & Control Instruments Division, North American Philips Co., 750 South Fulton Ave., Mount Vernon, N. Y. (D-302).

Burette Unit Features Plastic Reservoir

A new burette unit featuring a plastic reservoir which requires only a squeeze to fill an automatic self-leveling burette has been announced. Called the "Squeeze-O-Matic," it is said to be easy and simple to use—a time-saver requiring only one hand. Reservoir is highly resistant to chemical attack and will not contaminate standard titrating solutions, the manufacturer claims. A special base holds the plastic bottle and also provides a convenient platform for


OLD SPINNING FRAME MAKE YOU UNHAPPY?
Don't let it get you down! Rebuild your old spinning or twister frames with our proven plan of modernization. Our application will increase your production, also uniformity of twist and breaking strength . . . down time will be substantially reduced. One trial frame will prove the merit of HOMCO products!
Why lay out cash for a new frame when you can make your old one produce the same amount as a new one? Contact Holloway Manufacturing Company for information today. New Spinning Frame Results on an Old Frame!
HOMCO PRODUCTS
• PULLEY DRIVES • BALL BEARING IDLER PULLEYS
• CYLINDER BEARINGS AND JOURNALS • BALL BEARING JACK STUDS
• SEPARATORS • CHAIN DRIVES
• BALL BEARING APPLICATIONS FOR THE CARD ROOM
HOLLOWAY MANUFACTURING CO.
110 E. TAYLOR FA. 3416 EAST POINT, GA.

It's DURA BEAU that gives eye appeal—alluring glamour—to fine stockings . . . time tested, *sales tested*, today more stockings are finished with DURA BEAU than *any* other finish—*than all other finishes combined!* . . . Extra beauty for more sales . . . greater snag and run resistance for more "firsts," less "seconds" . . . DURA BEAU *means* hosiery that's more DURAble, more BEAUtiful!

DuraBeau TEXTILE FINISHES

REG. U.S.A. and CANADA

SCHOLLER LABORATORIES and practical field men are at your service everywhere, anytime to help you with your technical finishing problems. Write, wire or phone.

SCHOLLER BROS., INC. • Manufacturers of Soaps, Softeners, Sulphonated Oils and Finishes • Collins & Westmoreland Sts., Phila. 34, Pa. • St. Catharines, Ont., Can.

beaker, flask or dish. Molded stopper arrangement holds burette in position. Available in 25-ml. and 10-ml. sizes graduated to tenths of an ml.

Hagan Corp., 323 Fourth Ave., Pittsburgh, Pa. (D-303).

Mechanical Hole Detector For Knit Goods

A new mechanical device automatically detects holes in knitted fabrics, eliminating necessity for visual inspection of the materials. It can also be applied to woven fabrics.

Used in conjunction with a laying-up machine, the detector finds holes the size of an ordinary pinhead or larger, in either flat or tubular knit goods it is claimed, It will even catch holes on the fold of the material, according to reports.

For tubular fabrics, the unit is set up on the laying machine so that it checks both sides and edges of the fabric at the same time. When installed on an electrically operated machine, the detector will stop the machine automatically when it reaches a hole, also indicating on which side of the material the hole is located. On a manually operated spreader, the detector will ring a bell or buzzer, or turn on a light.

Among the definite benefits resulting from the use of the mechanical hole detector, is the reduction in the amount of damaged merchandise or "seconds." By actual test, the detector finds up to 50 per cent more holes in the fabric than can be done by visual inspection.

In addition, the use of the detector assures an increase in production per manhour. An operator can lay up from three to four times more cloth on an electric machine equipped with the device. The electric machine requires no manual handling while in operation, and will stop only when a hole is detected, or at the end of the piece, when it is halted automatically.

Cutting Room Appliances Corp., 45 West 25th Street, New York 10, N. Y.

For additional data, request item D-803, using business reply card on page 258.

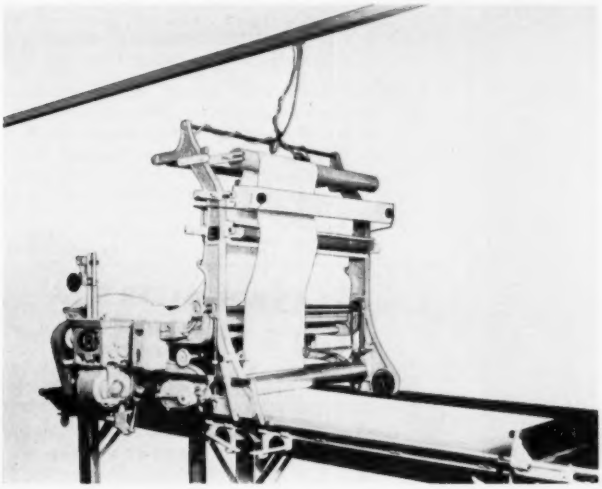
Spinning Frame Drafts Changed by Levers

Cotton spinning frames with gauge of 3" or more, manufactured by Nazionale "Cogne" S.P.A., Imola, Italy, and recently made available in the United States, are equipped with a draft gear box in oil bath which permits draft changes by simply moving one of four levers (see accompanying photo); also pressure is applied to draft rolls by means of springs, eliminating levers, etc., below the rolls and making cleaning easier—pressure on each can be adjusted independently.

Fitted with the Leblanc-Roth 4-roll high draft assembly, the frames are built as follows: 2½" gauge, 1½" ring, 8.66" bobbin; 3" gauge, 1¾" ring, 9.84" bobbin; 3½" gauge, 2" ring, 9.84" bobbin; 4" gauge, 2½' ring.

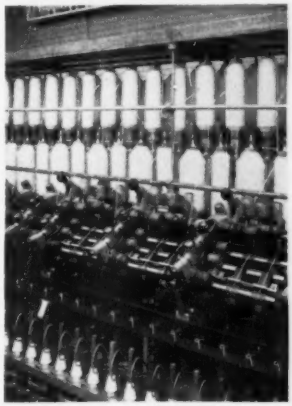
Other features of the machines are

Laying-up machine equipped with knit goods hole detector (CRA).

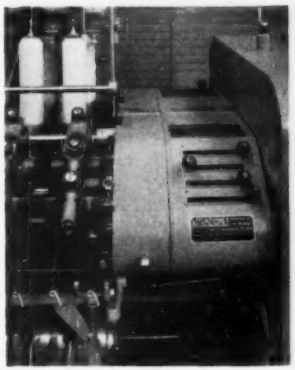


NEW Equipment AND MATERIALS

Pigtail guides have an adjustable motion providing a balloon of almost constant length and shape; meters on headend of frames provide direct in-



DRAFTING ELEMENTS of the "Cogne" cotton spinner are shown in photo above. Below, draft gear box and levers for changing drafts.



dication of speed of spindles and surface speed of draft rolls; drives are placed on both headstocks—the main headstock includes all drives for the draft and the twist; in the other headstock there is the motor.

Twister frames with the same features are also manufactured by this firm.

Stellite American Corp., 60 East 42nd St., New York 17, N. Y.

For additional data, request item D-112, using business reply card on page 258.

A LITTLE WOBBLE IS ALRIGHT IN THE RIGHT PLACES . . .

But not in spinning or twisting. Hard, smooth finish. Long running, short "break-in" . . . and a size for every need, including special designs for special requirements.

Ragan Rings

RAGAN RING COMPANY
The only manufacturers of Textile Rings in the South
866 Murphy Avenue, P. O. Box 174, Station A, Atlanta, Ga.

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John Foard—P. O. Box 574—Newton, N. C.
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for TOP EFFICIENCY in your Dyeing Room

Specify ALLEN TOP DYEING MACHINES

Allen-Worcester stainless steel top dyeing machines are durable, easy to clean and extremely economical to use. In addition to controlled liquor flow and trouble-free liquid seal covers, they have two special features which save time and money during and after the dyeing process.

- **No recombing after dyeing.** Allen-Worcester top dyeing machines produce a uniformly dyed top—eliminate the necessity for recombing after dyeing.
- **Power doffing.** Operators are not required to climb into the machines because the tops are stripped automatically and raised to a convenient doffing height.

Write today for full details and technical data.

WILLIAM ALLEN SON'S COMPANY
WORCESTER 1, MASS.

ALLEN WORCESTER

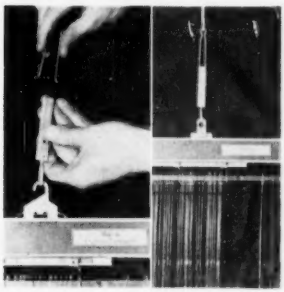
Makers of the famous ALLEN KIERS

ESTABLISHED 1872

Harness Frame Regulator Saves Loom Fixers Time

A cadmium-plated harness frame regulator recently made available in this country is reported to save many hours of loom fixers time because of the ease with which adjustments can be made when the simple device is utilized.

Manufactured by Staubli Bros., Horgen-Zurich, Switzerland, it can be attached directly to the open



Harness frame regulator (Theiler).

hooks of the harness frame or to leather straps where they are used. The regulator's spring wire can be turned around in order to obtain a distance of ½ hole.

This thin regulator fits all hooks and harness suspensions, it is claimed.

H. J. Theiler Corp., Whitinsville, Mass.

For additional data, request item D-107, using business reply card on page 258.

Reversing Mechanism for Batt Lappers in Garnetting Operation

The "Huntermatic" lapper reversing mechanism for use on batt lappers in garnetting operations is a sealed clutch device driven by two V-belts directly from the last main cylinder of the garnett. It is designed to provide uniform carriage reversal, the manufacturer states. Installation can be made on any make lapper, it is claimed.

The mechanism consists of a drive shaft, coupling elements, oversize multiple disc friction clutches, and ball bearings, all immersed in oil and enclosed in a sealed unit contributing to long life and trouble-free operation. It is compact for space saving in usually crowded quarters.

Other advantages claimed: it is easier to maintain, safer, pile ups of fiber at the edge of the batt are eliminated, wear is reduced.

James Hunter Machine Co., North Adams, Mass. (D-101).

NEW Equipment AND MATERIALS

Fiber Marking Tag Withstands Washing

Losses and delays during washing or finishing processes due to lost, shedded, or washed out tags can be prevented by using "Lok-Tite" tags, the manufacturer reports. Made of tough "Permafiber" stock, these tags withstand washing or processing with no visible effect and no loss of markings, it is claimed. In addition, the rust-proof clip attaches instantly to the garment or piece with no chance of working loose or damaging the goods. Available with special ink

NON-FLUID OIL

TRADE MARK REGISTERED

"Performance Tested"

We cannot emphasize too strongly that NON-FLUID OIL is a specialty lubricant . . . sold only on "performance standards." NON-FLUID OIL is produced in grades exactly suited for each of your various textile machines *in their present* condition.

Do you have at present a particularly tough lubrication problem? Let us recommend the proper grade of NON-FLUID OIL and then you give it a "performance test" right in your own mill. It will soon prove its superiority over so-called "specification" oils and greases and its ability to provide cleaner and better lubrication at less cost. Write for your free sample of NON-FLUID OIL today.

New York & New Jersey Lubricant Co.

292 Madison Ave., New York 17, N. Y.

Works: Newark, N. J.

WAREHOUSES: Atlanta, Ga. — Birmingham, Ala. — Charlotte, N. C. — Chicago, Ill. — Columbus, Ga. — Detroit, Mich. — Greensboro, N. C. — Greenville, S. C. — Providence, R. I. — St. Louis, Mo.

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture, so-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.

The time is *NOW*... *BETTER* Your Looms with Stehedco and Southern the *BETTER* Loom Harness Equipment

Yes... the time is NOW! And, as American Industry swings into full capacity production to meet the demands created by the impending crisis... massed humanity throughout a civilized world waits with abated breath and a hope that the results of our efforts will not be "too little and too late."

The *Textile Industry* shoulders a grave responsibility in this emergency. Mills must reach with all possible speed a maximum of production... the flow must be constant. Men and machines must now accomplish the impossible... day after day.

To accomplish this tremendous weaving task, we place at your service the complete engineering experience and facilities of our five large plants—spread throughout the nation where STEHEDCO and SOUTHERN—mill trained field representatives await your call.

These engineers will recommend the proper harness to REVITALIZE OLD LOOMS. They'll explain why new, modern high speed looms require top quality STEHEDCO and SOUTHERN Loom Harness Equipment to assure... fast... uninterrupted... FIRST RUNS. We've been doing this job through every crisis... since 1898. That is why today 9 out of every 10 mills depend on STEHEDCO and SOUTHERN LOOM HARNESS EQUIPMENT TO... WEAVE THE WORLD'S NEEDS.

STEEL HEDDLE MFG. CO.
2100 W. ALLEGHENY AVENUE PHILADELPHIA 32, PA.
Other Offices and Plants
Greenville, S. C. • Atlanta, Ga. • Greensboro, N. C. • Providence, R. I.
•
SOUTHERN SHUTTLES Paris Plant... Greenville, S. C.
A Division of STEEL HEDDLE MFG. CO.
•
STEEL HEDDLE COMPANY OF CANADA, LIMITED
310 St. Hubert Street Granby, Quebec, Canada

NEW Equipment AND MATERIALS

for dyeing operations—can be easily read regardless of the color of dye used. Can be printed and sized to order. Ten fade-proof colors of tags available.

Liberty Marking Tag Co., Inc., 27 Hooper St., Brooklyn 11, N. Y. (D-301).

Heavy Cartons of Cloth Handled Safely by One Man

Danger of injury to operatives required to handle heavy cartons or boxes of yarn or cloth is reported to be eliminated when using a truck developed at a South Carolina mill.

The mill reports that before this truck was placed in use, two men were required to head-up one heavy box and accidents occurred frequently. With this truck, one man can do the job without fear of injury.

CLOTH TRUCK. Upper photo, loading position; lower, heading-up (Paddock).

It is not uncommon for one man to handle 90 to 100 boxes in eight hours, mill officials stated, capping, strapping, stencilling, fastening packing slips, and pushing them to a spot 50 to 75 feet away, and standing them on end.

Metal grooves in the bed make possible the placing of straps in best positions on various types and sizes of boxes, it is claimed.

J. C. Paddock Co., South Church Street Extension, Spartanburg, S. C.

For additional data, request item D-103, using business reply card on page 258.

Mona moisture meter for mill use.

Light-Weight Moisture Meter Rugged and Accurate

A portable moisture meter recently developed weighs slightly less than 4 pounds and measures only 7½" x 5¼" x 3⅛". Designated the Mona moisture meter, it is designed for practical use in the mill, the manufacturer states.

The instrument is of rugged construction to withstand unavoidable routine abuse, it is claimed; yet, it is accurate within ½ of 1 per cent.

The device measures the moisture content of textile fibers, sliver, roving, yarn, and fabric, at the location of production. The application is simple and the percentage of moisture is indicated instantaneously, according to the manufacturer.

The moisture meter is said to be suitable for cotton, wool, worsted, rayon, acetate, or other fibers, either in the grey or dyed. An all-rubber, molded electrode handle is credited for more accurate readings and more convenient application.

Mona Industries, Inc., Textile Chemical Div., 65-75 E. 23rd St., Paterson 4, N. J.

For additional data, request item D-110, using business reply card on page 258.

New Pen for Instruments Eliminates Flooding

For strip chart electronic instruments, pens that are reported to eliminate flooding and reduce paper plugging have been designed. The new pens have removable tips and a new reservoir construction whereby the ink level is always below the writing tip. Other advantages claimed are: pen operates with decreased pressure on the instrument chart,

Stehedco and Southern

The Products That Weave The World's Needs

ANOTHER Stehedco PATENTED FEATURE

Included among the 200 patent grants awarded to the Steel Heddle Mfg. Co., is one for the T-12 Slide Hook, illustrated.

Outstanding in service, the STEHEDCO T-12 is the best and most efficient Slide Hook on the market today. The T-12 reduces binding on the bar, because it has a longer bearing surface for the most FREE SLIDING.

SELF ADJUSTING, it permits minimum separation of heddle and is longer wearing . . . more economical.

Test the T-12 and find out what real slide hook satisfaction is.

1-1-25

STEEL HEDDLE MFG. CO.

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Other Offices and Plants

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SOUTHERN SHUTTLES Paris Plant . . . Greenville, S. C.

A Division of STEEL HEDDLE MFG. CO.

STEEL HEDDLE COMPANY OF CANADA, LIMITED

310 St. Hubert Street Granby, Quebec, Canada

Photographs taken in 1/20,000 second on a Draper X2 Loom at 175 picks per minute.

PICKMASTER Leather Pickers are available in the standard sizes required for Draper and Crompton & Knowles Looms.

Split-second follow thru

PICKMASTER® Leather Pickers do not bounce the shuttle

CUT SHUTTLE COST
(No hot spurs)
STOP KINKY FILLING
(No shuttle-bounce)
REDUCE BANG-OFF
(Perfect boxing)
INCREASE PROFITS

CATALOG presents the complete line of Textile Leathers for weaving — also aprons and tapes. Ask for a copy — on your letterhead, please.

These "split-second" photographs prove that a Pickmaster Leather Picker *follows-thru* in a long, sweeping throw that sends the shuttle swiftly and smoothly into the other box. There, another Pickmaster catches it *without shuttle-bounce* — moves back with it *snug in the hole* to the end of the lay.

Pickmaster Leather Pickers do not retain and build up heat; do not catch fine filament.

Follow-thru with Orange Line Loom Leathers. More than 50 types are available to help loom tenders get more yardage with less waste and down-time.

second century G and K Orange® Line **Textile Leathers**

GRATON & KNIGHT COMPANY, Worcester 4, Mass. — DIXIE LEATHER CORPORATION, Affiliate, Albany, Ga.

NEW Equipment AND MATERIALS

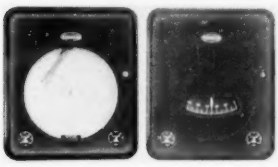
tending to reduce paper fiber choking ; thorough cleaning is made easy by a simple disassembly. The new pen fits on standard pen carriages, the manufacturer states, permitting improved performance for instruments already installed.

Minneapolis-Honeywell Regulator Co., Brown Instruments Division, Wayne & Windrim Aves., Philadelphia, Pa. (D-201).

Pneumatic Controllers For Textile Processes

Useful in all textile processes requiring automatic control of pressure, temperature, liquid level, and flow, is a new series of pneumatic controllers which, according to the manufacturer, offer advantages in simplicity, range of adjustment, ease of accessibility for adjustment and servicing.

Both recording and indicating controllers are included in the line. Types of control: Proportional, proportional reset, on-off, differential gap. Supplementary types: pneumatic-set, time cycle, differential, manual control unit. Ranges: pressure—up to 5000 psi; temperature—between minus 40 and 1000 F; flow—between 0-20 and 0-200 in. H_2O; liquid level—up to 50 ft H_2O.

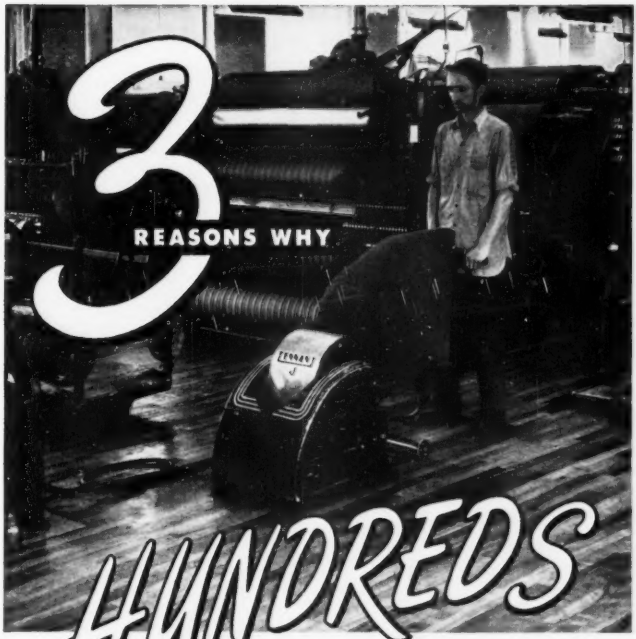


MASON-NEILAN 60000 Series controllers. Left, recording type; right, indicating.

Universal type case is provided for flush or surface mounting; door can be removed without tools; concealed stainless steel hinges; all connections are at bottom.

The backplate provides a rigid base for operational units; permits removal of individual sub-assemblies for servicing.

Proportioning mechanism incorporates gimbal principle and provides for setting proportional band or reversal of control action with one adjustment. Same adjustment



HUNDREDS
OF MILLS USE THE
TENNANT System
OF FLOOR MAINTENANCE

Its cost-saving performance and ease of use have established TENNANT as *THE accepted floor maintenance system of the U.S. textile industry.* This unique acceptance is due to these practical advantages . . .

1. CUTS FLOOR MAINTENANCE COSTS
You save 4 ways—in *manhours,* by cleaning faster in one operation with 1 man; you cut *accident costs* by DRY-cleaning (no wet, slick floors). You avoid needless *floor repair costs* . . . and reduce *stock losses* from snags, splinters and soilage.

2. EASIEST TO USE: eliminates scrubbing!
Works like magic! You get rid of dark, rough, oil-soaked fibers . . . and have a smooth, bright, *hardened* floor surface that resists dirt. Stays clean longer! Ends costly, harmful scrubbing and wet-mopping.

3. FITS YOUR MILL'S SPECIFIC NEEDS
Your TENNANT System is individually selected and planned, 100% *specialized* for your mill. Assures you of best results. Personal installation and periodic inspection . . . *without charge.*

ONLY DAILY CARE needed is fast, low cost sweeping. Oil, dirt and dust do not cling to the smooth, hard surface of a **Tennantized** floor. Dirt sweeps off easily . . . Keeps your floor bright and attractive.

OFFICES IN PRINCIPAL CITIES

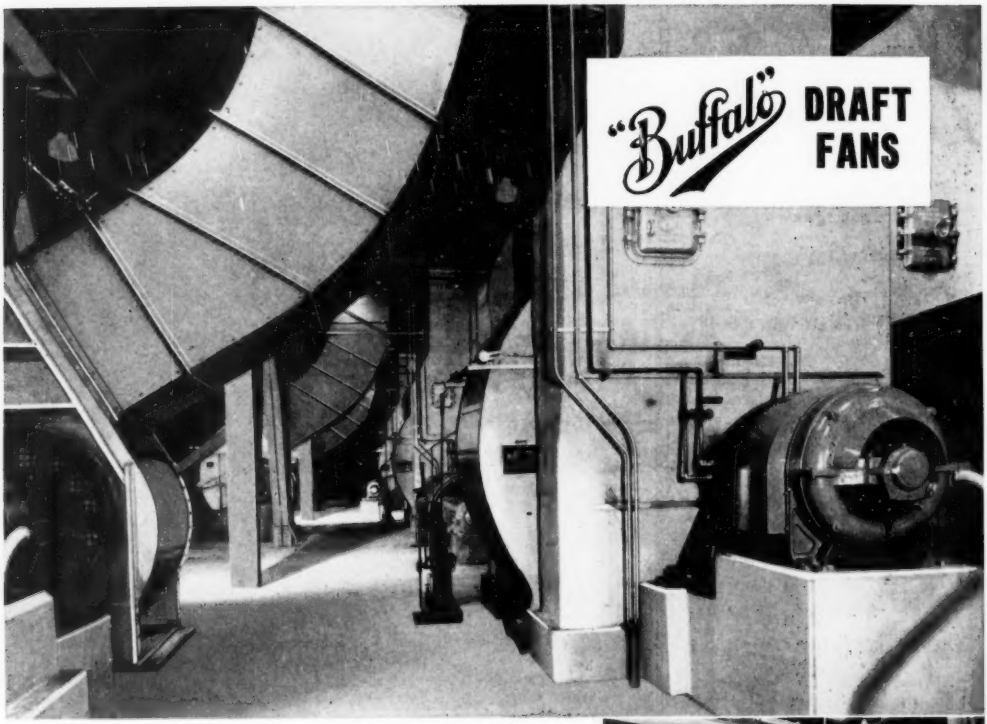
TENNANT Established 1870

G. H. TENNANT CO.
2524 No. 2nd Street
Minneapolis 11, Minn.

Write Today!
Get helpful case histories, illustrated bulletins, etc. Learn HOW YOUR MILL CAN SAVE ON MAINTENANCE COSTS . . with the Tennant System.

FLOOR MAINTENANCE SYSTEM
Creators of the TENNANT SYSTEM OF FLOOR MAINTENANCE—Manufacturers of Equipment & Materials for MAINTENANCE OF FLOORS, DECKS, ROOFS, HIGHWAYS

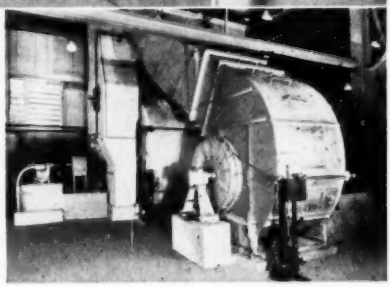
AIR POWER TO MEET LOAD DEMANDS *Quickly and Continuously*



For the important and punishing draft job, you want fans that will meet your varying load demands dependably. You also want fans that are built for the long run—fans that aren't continually requiring attention and repairs. And that means "Buffalo" Fans. These are the draft fans that have set endurance records in every type of power plant—many 25-year-old "Buffalo" Draft Fans still on the job have earned their keep many times over. That's because every part of these fans is built oversize—built specifically to stand draft service.

Above is a recent "Buffalo" installation in a municipal public utilities station. Three "Buffalo" Induced Draft Fans are on the right of the aisle, while three Forced Draft Fans are at left. *Consulting Engineers for this project were GILBERT ASSOCIATES of Reading, Pa.*

For helpful information on dependable draft service, write today for BULLETIN 3750.



More fans in the same station. In the foreground is a "Buffalo" F.D. Fan with variable inlet vanes for regulating combustion. In the rear is an insulated "Buffalo" I. D. Fan.

FIRST FOR FANS

BUFFALO FORGE COMPANY

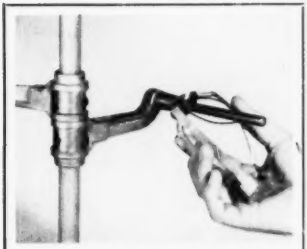
175 MORTIMER ST. BUFFALO, NEW YORK

PUBLISHERS OF "FAN ENGINEERING" HANDBOOK

Canadian Blower & Forge Co., Ltd., Kitchener, Ont. Sales Representatives in all Principal Cities

VENTILATING FORCED DRAFT | AIR CLEANING COOLING | AIR TEMPERING HEATING | INDUCED DRAFT PRESSURE BLOWING | EXHAUSTING

NEW Equipment AND MATERIALS



Save Time in Changing from Cones to Tubes in Warping Operation

When switching from cones to tubes in warper creeling operations, considerable time can be saved by utilization of the new McBride Snap-On Universal Cone Holder, the manufacturer claims.

No set screws or other mechanical adjustments are necessary. A simple, swift motion makes the complete change.

The cone holder snaps into place, firmly locking on the bowed spring spindle; yet it is free to revolve, thus facilitating tying of the transfer pigtails.

Edward J. McBride Co., 1398 Adams Ave., Philadelphia 24, Pa.

For additional data, request D-805, using business reply card on page 258.

used for differential gap control. Proportional and proportional-reset mechanisms interchangeable.

Reset unit includes resistance unit and capacity tank in one compact unit. Tapered valve construction permits reproducible settings.

Mason-Neilan Regulator Co., 1190 Adams St., Boston 24, Mass.

For additional data, request item D-104, using business reply card on page 258.

Reel Rack for Rope, etc.

Storage space is conserved and handling of reels of rope, etc., is made more efficient by a new type stacking rack. The reel is placed in the rack at floor level; "U"s provided on the cross members locate the reel axle. Reel and rack are then handled

CONTROL YOUR COSTS with PRINTWEIGH

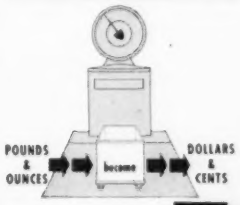
Printed weights keep records RIGHT in textile weighing!

STOP human errors in reading, remembering, recording

Toledo Printweigh Scales can help you *eliminate waste* and *improve accuracy of your control records* in receiving, stock rooms, batching, shipping and other operations in all plants today!

Printweigh stops errors . . . provides *printed* weight records . . . assures you that the accurate indication of the Toledo dial will reach your accounting records without chance of human error. Prints *directly* in big, clear figures . . . on thick tickets . . . on large or small sheets . . . on strips . . . with extra copies. Saves time, stops losses, assures *accurate* weights *accurately* recorded! Send for bulletin 2021 on modern weight control. Toledo Scale Company, Toledo 1, Ohio.

On your scale MATERIAL becomes MONEY



TOLEDO®

HEADQUARTERS FOR SCALES

micarta is basic!

Wherever textiles are made...

TEXTILE INDUSTRY

MICARTA does important textile jobs better than other basic materials. Bobbins, spinning buckets, lap rolls and shuttles are only a few of the MICARTA products which stand up under tough operating conditions. When you're looking for better performance, investigate the paying qualities of MICARTA.

MICARTA® is important in the making of cottons, synthetics, wools and blends. It is a basic material . . . a versatile, durable plastic. It stands up to punishment in bobbins, spinning buckets, lap rolls, shuttles . . . wherever the job calls for long life, smooth wear.

MICARTA won't chip or splinter . . . can't snag yarns or fabrics. It absorbs shock and vibration, resists heat and cold. MICARTA outlasts metal and wood in many key textile applications. This basic material can be machined, formed or molded easier and more economically than any metal.

Explore the paying qualities of this lighter-than-aluminum plastic. Westinghouse Electric Corporation, MICARTA Division, Trafford, Pennsylvania. J-06450-A

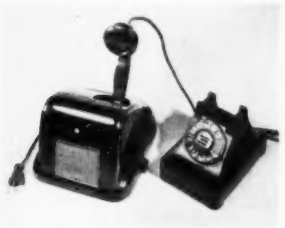
NEW Equipment AND MATERIALS

as a unit by lift truck. Racks are of welded square tube construction with self-aligning nesting feet that make stacking easy. With each reel free to rotate independently, lengths of material can be dispensed readily as needed.

Equipment Manufacturing, Inc., 21550 Hoover Rd., Detroit 5, Mich. (D-304).

Device Amplifies Incoming Telephone Conversations

An "Addiphone," placed on the desk, is said to offer the opportunity to listen immediately and without any special manipulation to incoming telephone calls, at a volume according to the size of the room and without holding the receiver. Hands are left free to write; conversation can



"Addiphone" (Exim Trading Corp.)

be recorded by a secretary; visitors in the office at the time can participate in the conversation without touching the receiver. No special installation required—just plug the device into a convenient electric outlet. Available for 110 and 220-volt current as required.

Exim Trading Corp., Addiphone Sales Division, 11 Broadway, New York 4, N. Y. (D-202).

Overload Release for Torque-Arm Speed Reducer

Instant and positive protection for driven machines, motors, and the speed reducer itself are provided by an overload release recently developed for the Dodge Torque-Arm Speed Reducer, the manufacturer claims. Designed to prevent breakdowns and avoid expensive repairs,

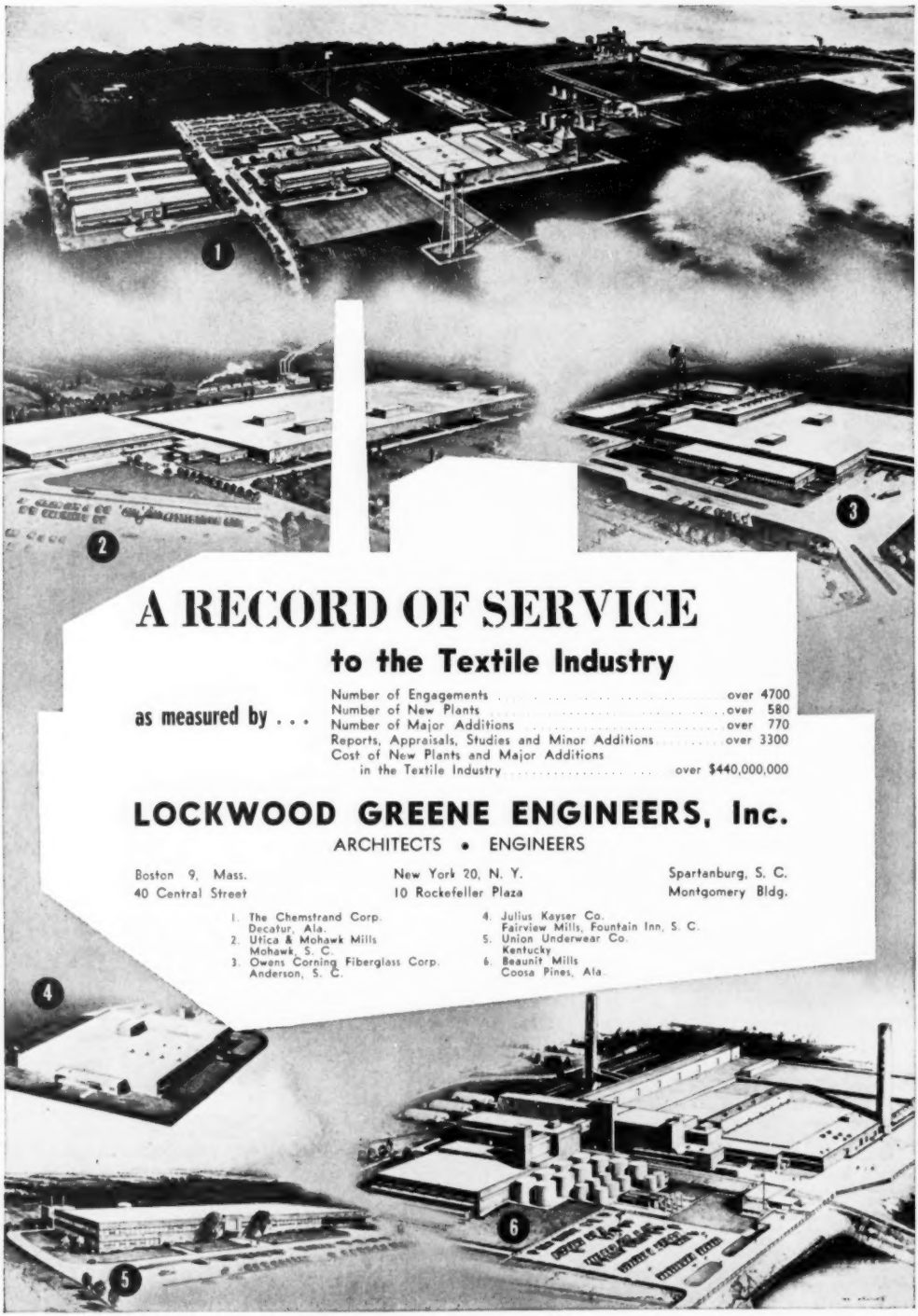
Mark of Excellence...

FOR
100
YEARS

Many, many years ago Adolphus Busch, co-founder of Anheuser-Busch, defined the reason for his company's growing success and reputation . . . "Making Friends is Our Business." Today, celebrating our 100th Anniversary, Anheuser-Busch still keeps faith with that same principle in all the phases of our business: Top quality for all Anheuser-Busch products . . . wholehearted, sincere service to our customers . . . and a continuous program of research and development to seek even better things for all the industries the company serves.

CORN STARCHES
DEXTRINES
GUMS
CORN SYRUPS
FOR THE TEXTILE INDUSTRY

Corn Products Department
ANHEUSER-BUSCH, INC. . . ST. LOUIS



A RECORD OF SERVICE

to the Textile Industry

as measured by . . .

Number of Engagements	over 4700
Number of New Plants	over 580
Number of Major Additions	over 770
Reports, Appraisals, Studies and Minor Additions	over 3300
Cost of New Plants and Major Additions in the Textile Industry	over $440,000,000

LOCKWOOD GREENE ENGINEERS, Inc.

ARCHITECTS • ENGINEERS

Boston 9, Mass.
40 Central Street

New York 20, N. Y.
10 Rockefeller Plaza

Spartanburg, S. C.
Montgomery Bldg.

1. The Chemstrand Corp. Decatur, Ala.
2. Utica & Mohawk Mills Mohawk, S. C.
3. Owens Corning Fiberglass Corp. Anderson, S. C.
4. Julius Kayser Co. Fairview Mills, Fountain Inn, S. C.
5. Union Underwear Co. Kentucky
6. Beaunit Mills Coosa Pines, Ala.

the Tri-Matic overload release operates both mechanically and electrically to loosen the belts, cut off the current, and activate a warning bell, siren, or light. The new unit replaces the standard torque arm that is regularly furnished with the Dodge speed reducer—the two are interchangeable.

Dodge Manufacturing Co., Mishawaka, Indiana. (D-203).

Dye Beck Features New Cloth Handling System

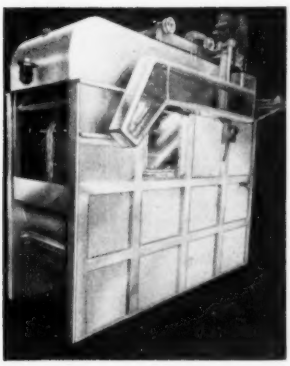
The dual reel and plaitor cloth handling system of a new line of Series "52" dye becks takes the place of an oval reel. There is no cloth slippage or surging with this system and thus cloth damage is greatly minimized, the company claims; also, need for wrapping reel is eliminated

The machine has successfully processed a full range of fabrics, from heavy felt to nylon tricot.

Two driven round reels are synchronized to carry the cloth in an even, tensionless manner, and a crank-type plaitor, located beneath the back reel, controls plaiting to desired lengths. The resulting smooth operation is said to be particularly advantageous for allowing high cloth speeds on shades that tend to dye unlevel.

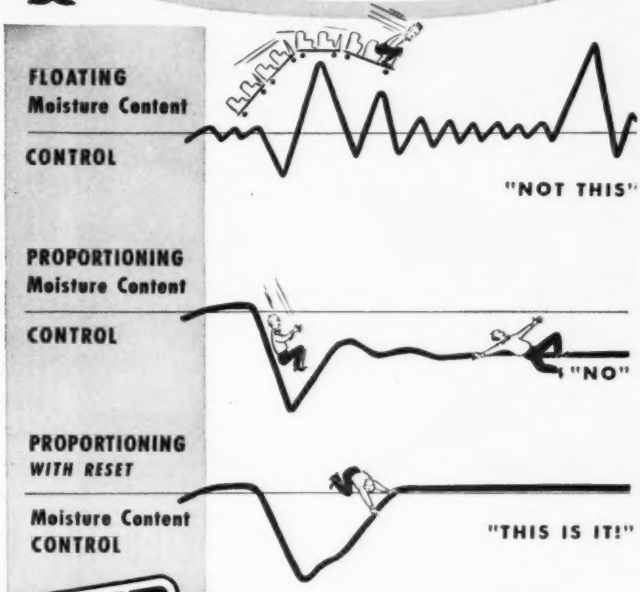
Other advantages claimed are: (1) compact, attractive design incorporates overhead drive; (2) new door construction allows door to slide up overhead or in flush with front par-

Rear view of Rodney Hunt's Series "52" dye beck.



FOR *TRUE* MOISTURE CONTENT *CONTROL*

let little "Moisty" demonstrate



BARBER COLMAN

MOISTURE CONTENT CONTROL

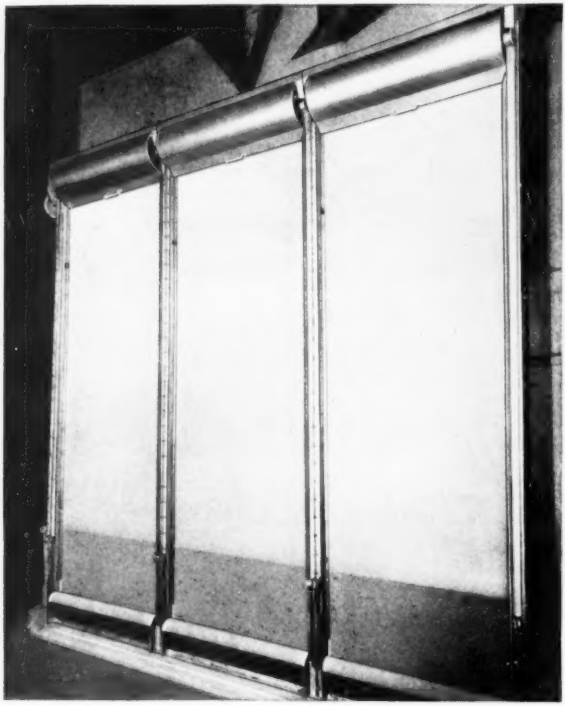
"A hunting we will go" is not little "Moisty's" idea of good moisture content control. He knows that severe hunting causes undue wear on mechanical components of the moisture content controller and, of course, non-uniformity of the warp's moisture content. Little "Moisty" demonstrates this undesirable condition in his first two stunts, but when he tests out Barber-Colman Proportioning with Reset Moisture Content Control, little "Moisty" can't help but shout "This is it!" Hunting is eliminated and superior moisture content control assured. So we leave our little friend with a smile on his face for now he can do the kind of moisture content control job he's always wanted to —

"Let me send you all the facts, folks."

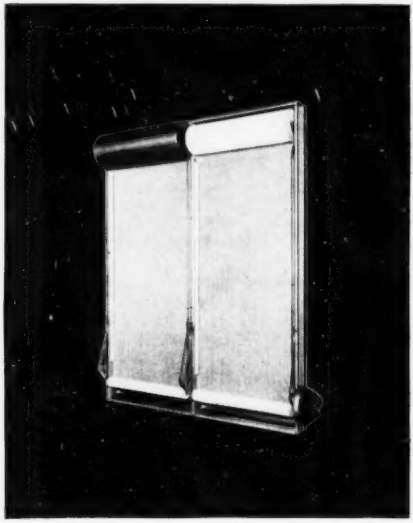
BARBER-COLMAN COMPANY
1201 ROCK STREET • ROCKFORD, ILLINOIS

BOSTON, MASS. • GREENVILLE, S. C.
ATLANTA, GA. • CHARLOTTE, N. C.

today's best buy is better air!



New 3 section Auto-Airmat installation cleans return air from weaving room.



A No. 8-84 Auto-Airmat Filter with one top cover retracted to show supply roll of 1-ply Airmat media.

automatic, self-cleaning lint filter ...AT WORK

AAF's Auto-Airmat is specially designed for Textile Mill service.

The new Auto-Airmat installation above is cleaning return air from a weaving room. The accumulated lint on the face of the filter is typical of a costly problem and a practical, economical solution. This automatic, self-cleaning lint filter not only cleans return air efficiently, but provides easy disposal of lint and reduces costly "overtime" maintenance on air washers.

In the Auto-Airmat a sheet of Airmat* media moves downward on an endless screen from a roll at the top of the filter. The media is rerolled at the base with its lint load . . . ready for easy disposal. The rate and frequency of screen travel is automatically controlled by a pressure switch. This starts the drive mechanism when resistance builds up to a predetermined maximum. The screen stops when sufficient clean Airmat has been introduced to reduce resistance by 0.1" wg.

Auto-Airmat maintains maximum filter efficiency at all times with minimum servicing and is available in many sizes and arrangements that meet virtually any air volume requirements.

If lint from your weaving, carding or spinning rooms is proving a costly problem, call your AAF representative . . . or write for our Engineering Bulletin No. 234.

★ ★ ★

**AIRMAT is the trademark (Reg. U.S. Pat. Off.) of the American Air Filter Company, Inc., for various air filters, dust collectors, and filtering media.*

American Air Filter
COMPANY, INC.
275 Central Avenue, Louisville 8, Kentucky

American Air Filter of Canada, Ltd., Montreal, P.Q. • Pacific Division Offices, San Francisco, Cal.

Bobbin for Gwaltney Spinning Frame

Designed for use on Saco-Lowell's new Gwaltney spinning frame is a bobbin 12" long, 1½" in diameter at the base and 1 5/16" at the tip, and constructed by American Paper Tube Company's "Plasti-weld" method.

In this method, a molded plastic seat of the special design required for the Gwaltney frame spindle is simultaneously molded and combined with metal tip and laminated barrel into a homogenous unit, insuring permanent precision, the manufacturer claims.

American Paper Tube Co., Woonsocket, R. I.

For additional data, request item D-702, using business reply card on page 258.

tition exposing only front compartment for chemical additions—steam escapes up and away from operator's face as door is opened; (3) pinrail is located high above liquor level so that there is added chance for tangles to shake out before hitting rail; (4) "Film-Flow" water inlet introduces even film of water across tub front; (5) built-in overflow directs overflow liquors to drain; (6) greater fabric capacity with less water volume.

Rodney Hunt Machine Co., Orange, Mass.

For additional data, request item D-108, using business reply card on page 258.

Small Cam Valve

Excluding the cam roller, a cam operated valve now on the market is less than 4" high and has a 3" x 3½" base. It is a ¼", four-way valve with a long lever whose travel is less than 1". Designated as Ross Valve No. 636, the unit is said to be especially suitable for low volume applications requiring a mechanically operated valve.

Ross Operating Valve Co., 120 East Golden Gate, Detroit 3, Mich. (D-305).

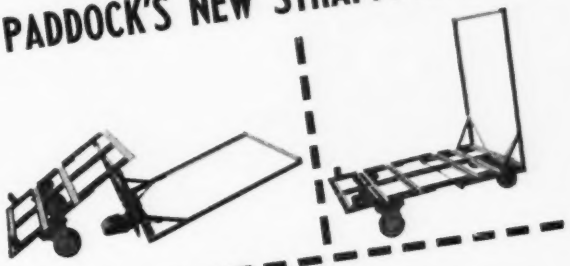
NEW Equipment AND MATERIALS

New Flow Meter Float Increases Flexibility of Application

With the development of a "Predictable" metering float for the "Flowrator" area flow meter, a new flexibility of use is provided, the manufacturer claims—flow factors can now be easily changed to allow the application of any one meter to various services. Other benefits reported to be derived from the development are reduced prices and immediate shipments from stock.

Fischer & Porter Co., Hatboro, Pa. (D-807).

PADDOCK'S NEW STRAPPING TRUCK



Heading-up position (Patent Pending)

Normal position for Loading

CUTS ACCIDENTS AND INCREASES PRODUCTION ... ONE MAN HANDLES

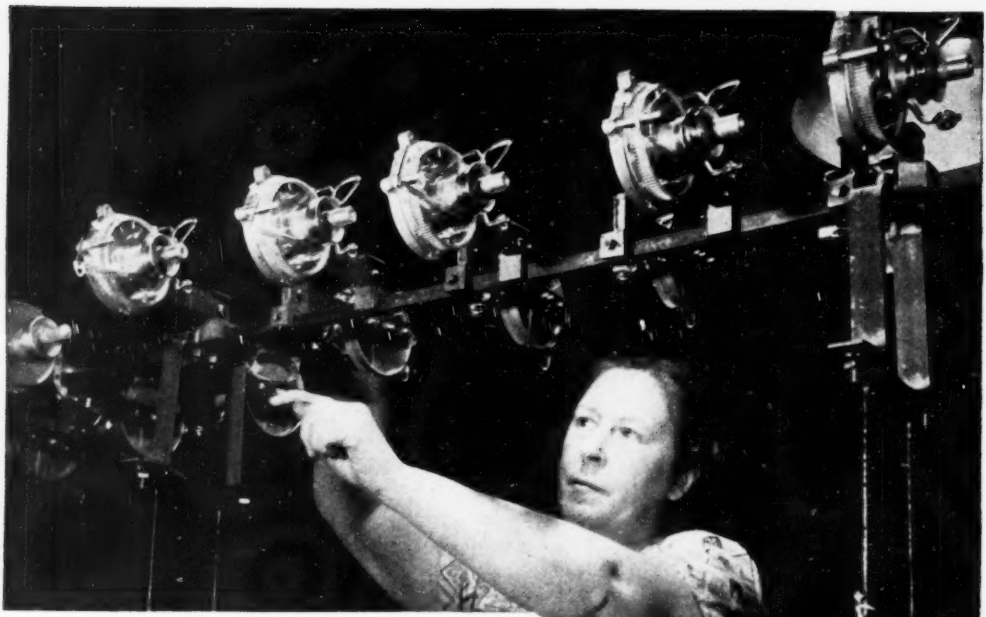
Note metal grooves for placing strap in the best position around different size boxes.

It is not uncommon for one man to handle 90 to 100 boxes a day, capping, strapping, stencilling, fastening packing slip and standing them on end 50 to 75 feet away.

Operator avoids dangerous strains . . . minimizes accidents . . . is a more productive employee.

We invite demonstration requests.

J. C. PADDOCK CO., SPARTANBURG, S. C.

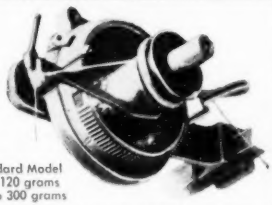


TENSION PROBLEMS?

Solve them with a **KIDDE** compensator

To maintain constant tension at speeds up to 1000 yards per minute, all you need is a Kidde Double Disc Compensator! It comes in two types—10 to 140 grams and 100 to 300 grams—and is especially suited for tender, high twist yarns.

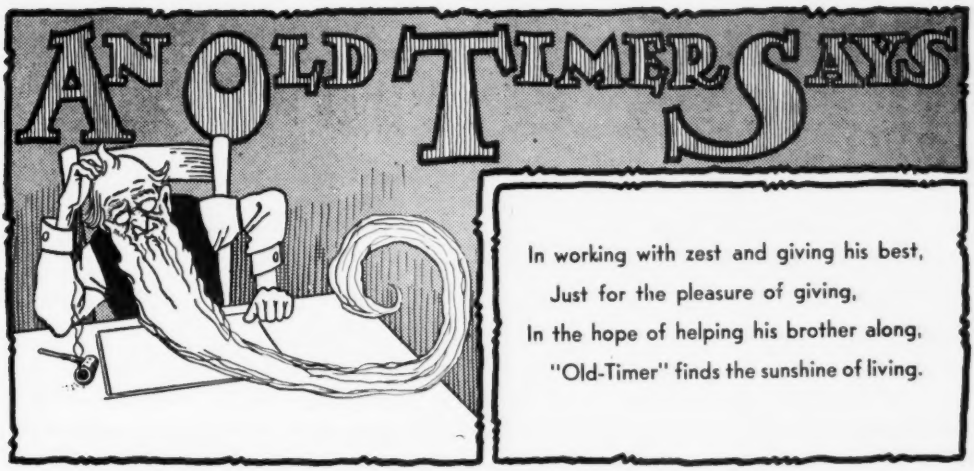
For average speeds and tensions, one of the Standard Models—6 to 120 grams or 100 to 300 grams—is the answer to your tension problems. For quilling, warping of rubber yarns and winding of narrow fabric bobbins, there is a Kidde Tension Compensator that can improve the quality of the finished product. Write today for information.



Standard Model
6 to 120 grams
100 to 300 grams

Kidde

Walter Kidde & Company, Inc.
490 Main Street, Belleville 9, N. J.


AN OLD TIMER SAYS
In working with zest and giving his best,
Just for the pleasure of giving,
In the hope of helping his brother along,
"Old-Timer" finds the sunshine of living.

Study Yourself--as well as your machines

WE THINK we all agree that the progressive overseer or superintendent makes a definite study in detail of each and every item which goes into his machines to obtain the highest efficiency of production. He also plans what to do and have done by his subordinates, uses all of his ideas his experience has taught him, and applies all the information he can get by studying other men's ideas and experiences to prolong the life of those machines.

The overseer of carding has made a life-long study to produce the highest quality roving. Every setting of each machine has been studied, experimented with, and kept in order to cause those machines to produce the maximum production with the minimum amount of wear.

The overseer of spinning and the overseer of weaving likewise have put their brains to work on what goes into their machines and the methods of operation which produce the longest supply parts life. Mr. Mill President, too, has given years of study to the general or overall problems of the efficiency of his machinery—the cotton he puts into his mill, the men he employs, and how he markets his products.

During all these years we have been wondering how much thought and study these men have put into running their own human machines. What kind of foods are best suited to put into your particular human machine?

More people are realizing every day that it is a simple fact that the food you eat three times per day definitely determines your state of well being—how you feel when you go to your job—how you react to complaints—how you talk to your associates, your subordinates, and your supervisors.

Yes, even how long you will live.

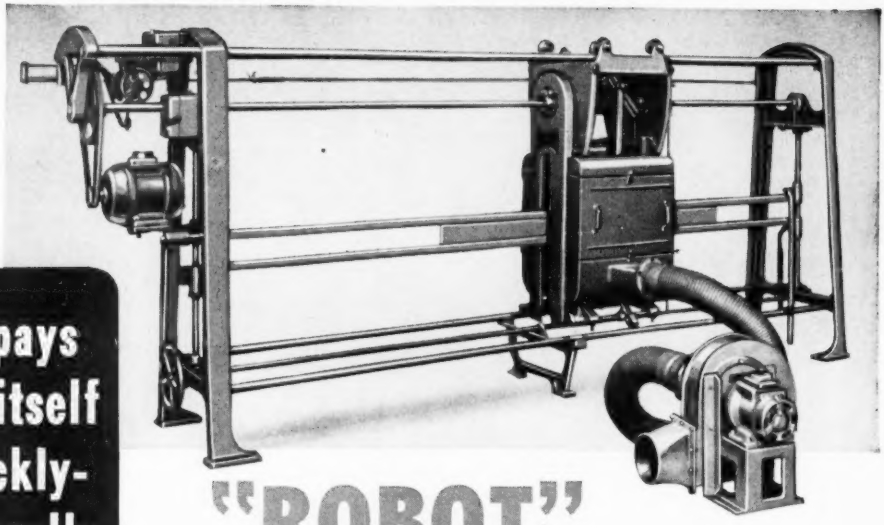
Seems to OLD-TIMER that if you are such a darn good manufacturer you have missed a chance to be a *better* one if you have not made a study of what you put into your personal machine to make it operate as efficiently as your cotton mill equipment. You do not have to be a doctor of medicine; just use a little common sense.

A Share in the Business—That's "Something"

TO BE WORTHWHILE—to be "something"—is an inherent feeling of practically all human beings, thank goodness. If employees can be made to feel that they are a part of the company, undesirable outside interests will have a hard time getting an ear.

Through a man's pocket book is one simple way to hold his interest. Just why more mill presidents don't listen to OLD-TIMER'S plea to sell preferred stock or certificates of deposit to employees, is hard to understand. They certainly could not lose anything by it.

Probably you have a surplus now and don't need the money. O. K., have you ever heard the slogan, "It pays to advertise?" Is



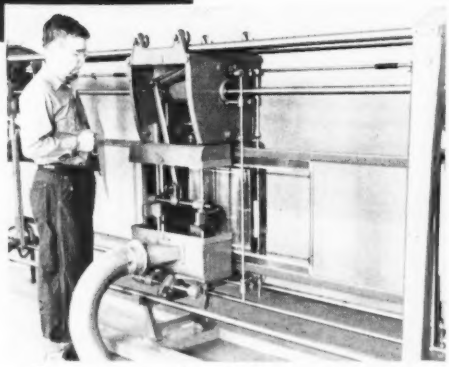
It pays for itself quickly- generally in less than 1 year

"ROBOT"

AUTOMATIC REED AND HEDDLE BRUSHING MACHINE

At top: Over-all view of "ROBOT" with dust exhauster set up for cleaning and polishing reeds.

BY Sam. Vollenweider LTD.
HORGEN, SWITZERLAND



Close-up of central mechanism cleaning heddles

It is an accepted fact that both reeds and heddles are more economical to use — do a better job — when they are subjected to a cleaning and polishing process at regular intervals.

You can do both these operations on this efficient, dual-purpose "Robot" Automatic Reed and Heddle Brushing Machine. Here's what it does for you:

- **Cleans, hones and polishes REEDS**
- **Cleans and polishes HEDDLES in or out of the harness frame**
- **Quickly removes rust, size and dirt**

Here's the finest reed and heddle brushing machine on the market today — an investment which pays for itself quickly — generally in less than one year.

H. J. Theiler CORPORATION
WHITINSVILLE • MASS.

EXCLUSIVE DISTRIBUTORS

Hasler S.A. Berne
CENTRAL RECORDING INSTALLATIONS
DIFFERENTIAL INDICATORS

Stäubli Bros. & Co. HORGEN-ZURICH
PAPER DESIGN DOBBIES AND
CARD PUNCHING MACHINES
SHUTTLE TRUING MACHINES

Fröhlich
HEDDLES • DROP WIRES
HARNESS FRAMES

there anything more important to you than your operatives?

Anyway, some mill presidents are seeing the light and are doing something about it. We quote from a mill executive's letter received today (not his exact words): "The plan you have outlined to us is exactly what we want and I look forward with a great deal of pleasure to your next visit."

—♦—

Cleaning Sinker Rings

(*Continued from page* 111)

sinker slots may become rough, bent, or damaged, and they do in time become packed with lint or foreign matter. A combination of these minor ailments may cause loose or tight vertical streaks which do not enhance the appearance of the knitted fabric.

A check-up on the rings at regular intervals is a "must" in order to keep them in good shape. Cleaning every slot thoroughly is important.

The photographs [on page 111] show a Komet sinker ring and a cleaning tool (especially designed for Komet rings). The tool is made of two strips of sheet aluminum ⅛" thick, ¾" wide, and 4½" long. Also required are four ¼" flat head 6/32 screws and a piece of spring steel of proper thickness ⅝" x 1¼". The curve of the cleaning point on the tool matches the curve of the sinker slot. The cleaning point is attached to the handle so lint can be pushed or pulled out of the bottom of the sinker slots where it always accumulates on Komet sinker rings.

We have found that this type of cleaning tool works well on Scott & Williams, Banner, and Standard sinker rings. The cleaning point should be made of correct thickness to fit the sinker slot and move freely therein.

The cleaning operation should help materially to locate bent walls which may cause sinkers to bind, thus preventing free movement during knitting operations.

Several thicknesses of cleaning points can be made to use on one handle so it will suit 24, 36, 48, or 54 gauge rings. This tool can also be used to remove lint from the verge bit slots on Komets.

ANY Bearing you need from JOHNSON

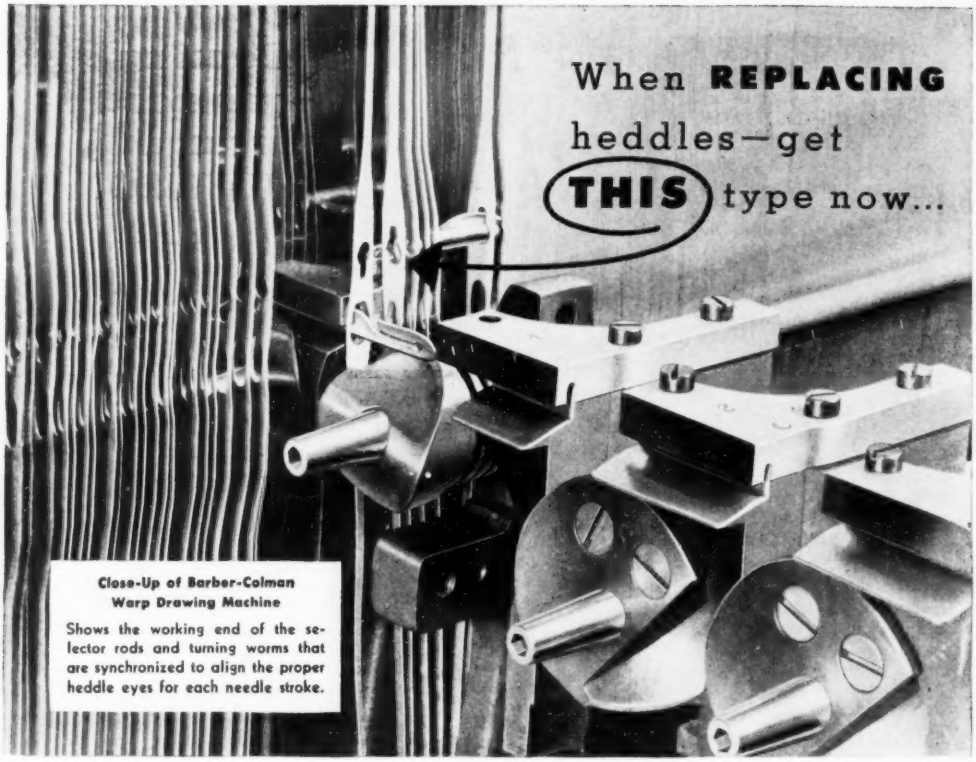
Here is the motor bearing service you need. Over 300 Johnson Electric Motor Bearings are available from authorized distributor and warehouse stocks. Every one is listed in the Johnson Catalog by number, manufacturer's number, size and motor type. Merely refer to this catalog . . . then call your distributor.

JOHNSON BRONZE COMPANY
530 South Mill Street • New Castle, Pa.

Write today for the NEW Johnson Bearing Catalog

Sleeve Bearing Headquarters Since 1901

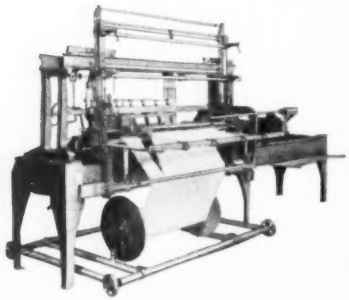
JOHNSON JB BEARINGS
Sleeve-Type



Close-Up of Barber-Colman Warp Drawing Machine

Shows the working end of the selector rods and turning worms that are synchronized to align the proper heddle eyes for each needle stroke.

By replacing your heddles with key-hole type **NOW** you will be ready for a Warp Drawing Machine **LATER**



The Barber-Colman Warp Drawing Machine requires equipping your looms with harness having steel heddles of the type shown above. Sometimes the cost of such heddles may amount to more than the cost of the machine. These facts should not discourage consideration of the machine, in view of the advantages of substantial cost savings in warp preparation. Since you are replacing groups of your heddles frequently and constantly as they wear out — why not replace your worn-out harness with the type that can be used on a Barber-Colman Warp Drawing Machine? Then, when you are ready for the machine, the problem of special heddles will have been solved. For details in connection with such a program, we suggest you consult your Barber-Colman representative.

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • DRAWING-IN MACHINES

BARBER-COLMAN COMPANY

ROCKFORD • ILLINOIS • U. S. A.

FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U. S. A. MANCHESTER, ENGLAND MUNICH, GERMANY

X-51 Acrylic Fiber

(*Continued from page* 114)

soluble leuco ester vat dyes. In view of the ease with which X-51 staple can be dyed by the regular vat dyes, the use of the more expensive soluble vats may be somewhat restricted. In the case of certain blends of other fibers with X-51, the soluble vats may show some advantages. Each blend, however, is a study in itself.

Scouring and Dyeing Filament X-51

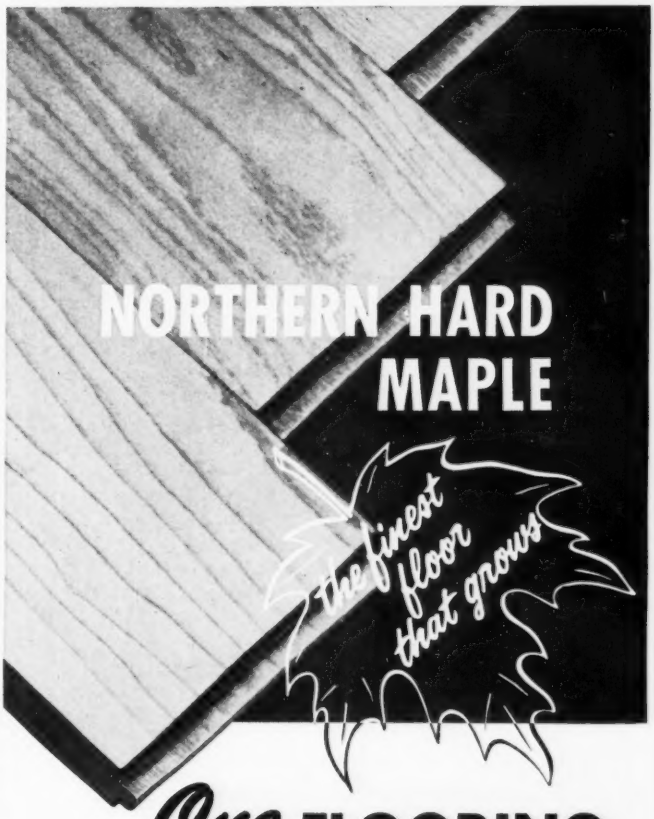
The statements made are based on fewer dyeing experiments than was the case with the staple fiber. To date, less filament yarn has been available for study.

The dyeing properties of X-51 continuous filament acrylic fiber differ materially from the dyeing properties of X-51 staple. The principal difference is the depth of shades obtainable. The continuous filament can be dyed by the following classes of dyes: acetate, acid and direct, basic, vat, and soluble vat.

Scouring. The most efficient scouring method that has been devised to date for X-51 continuous filament is to boil the fabric 15-30 minutes in a solution containing 0.25% Deceresol OT wetting agent and 0.1% glacial acetic acid.

Acetate Dyes. The acetate dyes show the most promise for dyeing continuous filament. The build-up in depth of shade, except at temperatures above the boil, is not quite so good as the build-up on the staple. At the boil, light to medium shades can be produced. At temperatures of 240 - 250 F, heavy shades can be obtained. In general, the fastness of these dyes on continuous filament is better than the fastness on X-51 staple and is about equal to the fastness on acetate filament. This statement holds true for fastness to light, washing, perspiration, and crocking. The fastness to gas fading appears to be better on X-51 than on acetate. Some dyes do, however, show color changes when subjected to the usual gas-fading test.

The depth of shade, per unit weight of dye in the dye-bath, and the fastness properties obtained at



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And this is *why:* Northern Hard Maple is *resilient.* It is bright and smooth and tight. It is warm and dry and doesn't splinter. Simple brushing cleans it. It's easily re-surfaced. It's hard to dent or scuff. It creates no dust, catches no lint. *Everybody* likes to walk on it, stand on it, *work* on it. *See Sweet's* Arch. 13i/MA for data, or write:

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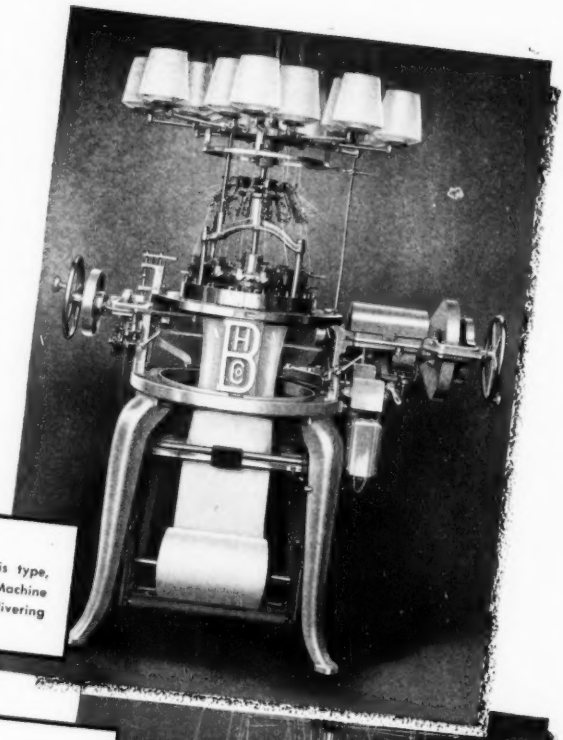
FLOOR WITH NORTHERN HARD MAPLE
BEECH AND BIRCH

BRINTON

OFFERS YOU YOUR CHOICE OF TWO TYPES OF RIB BODY MACHINES

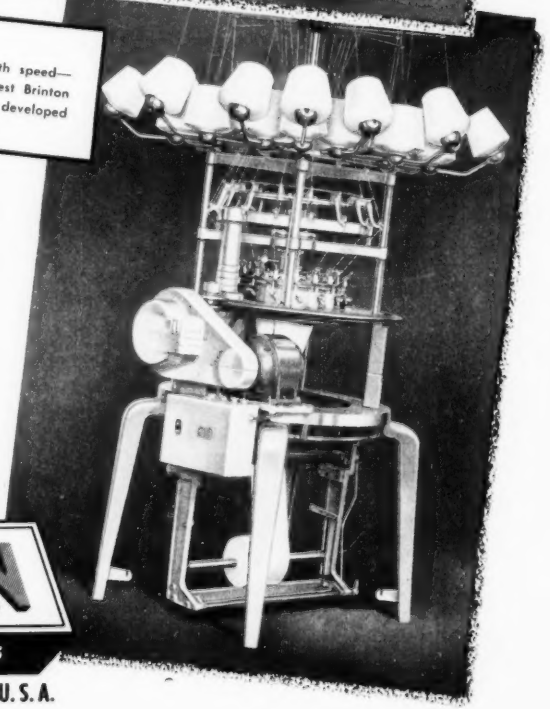


STATIONARY CYLINDER

Throughout the world knitting mills are using this type, such as the Brinton Maximum Feed Rib Body Machine shown above, because they find it unexcelled for delivering quality and quantity production.

REVOLVING CYLINDER

New features of engineering are combined with speed—plus—quality production in this type—the newest Brinton development. Years of Brinton research have developed these revolving cylinder machines.



WEIGH THE ADVANTAGES

Each type of machine has features of merit. Select the type best suited for your operation. The outstanding advantage of the machine, whichever type, is the Bonus Feature: *Brinton's 63 Years of Know-How*—seasoned engineering ability, expert mechanical knowledge, top-flight production experience and skilled craftsmanship—which assures you of the highest quality machine it is possible to manufacture.

BRINTON

CIRCULAR KNITTING MACHINES

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Publication Traces Development of Fiber Flax Deseeder

The recent development of an improved fiber flax deseeder through the cooperative research of agricultural engineers of the U. S. Department of Agriculture and the Oregon Agricultural Experiment Station, is discussed in detail in USDA Circular 890, "Deseeding of Fiber Flax."

Like other mechanical developments resulting from this research, the deseeder is helping the fiber flax industry in this country compete on a favorable basis with that of other nations which depend on cheap labor, using old methods.

A five-man crew operating the improved deseeder can process more than three tons of flax straw an hour. As it passes through the machine, the straw is deseeded, straightened, and automatically tied into neat, uniform bundles. In this way, the machine reduces labor required in subsequent operations and supplies a more uniform fiber.

equal depth of shade are improved appreciably by an increase in dyeing temperatures.

The dyeing procedure is the same as that described under the section on the staple fiber.

Acid and Direct Dyes. The dyeing procedure is similar to that described previously. For continuous filament, the build-up of these dyes is not so good as with the staple fiber. Light to medium shades can be produced.

Basic Dyes. Basic dyes will produce some interesting shades on X-51 continuous filament. Since these dyes exhaust very rapidly and don't seem to move after they are applied, a careful control of the initial dyeing temperatures is advisable.

The technique of dyeing is the same as that recommended for the staple. Heavy shades are not advocated because of the possibility of crocking.

Vat Dyes. X-51 continuous filament, in contradistinction to the staple fiber, cannot be dyed with vat dyes from an alkaline bath. Light to medium shades can be produced by applying these dyes by a modified vat-acid method. The fastness to washing, perspiration, and dry cleaning is excellent. The light fastness is also outstanding. At the present time, however, dyeing costs will be rather high. In spite of the expected high cost, this method of dyeing may find a place for certain end uses of filament yarns.

Soluble Vat Dyes. Light to medium shades can be produced by applying soluble vat dyes from a sulfide acid bath to X-51 continuous filament. The fastness

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FALL
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TO CONDITION YOUR MILL FOR
Summer Comfort
Comfortable workers are more efficient. Removal of heat, dust, fumes, and impurities are a "must" in up-to-date textile mills. Ventilation alone, spot cooling, or a combination of both can solve your particular comfort problem.
EVACUATION VENTILATING
Adequate exhaust at high wall levels or via roof evacuate the hot trapped air in your mill—as below.
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Murray Industrial Fans of rugged, heavy duty construction, yet with the built-in Murray "Whisper-quiet" operation are in 7 sizes and power ratios. Write for information to...
SPOT MAN-COOLING
Particular work areas may require spot cooling via direct or portable ventilating fan units. See diagram below.
INSTALL A Murray BREEZE CONDITIONING SYSTEM
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INDUSTRIAL VENTILATING FANS
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They Hold Their Beautiful Dullness

Nylon stockings treated with the new Filaseal System stay fresh and lovely, free from wrinkles, snags and ugly shine . . . *and they hold their beautiful dullness.*

The new Filaseal System contains a resin finish, a dulling agent, an exhausting agent and a wax lubricant — all applied in one bath after the dye is dropped.

Amalgamated Chemists will develop the proper Filaseal System to meet your requirements. Without obligation, we will send a representative into any mill located near either of our headquarters with enough Filaseal to finish 50 dozen or more stockings. Or, if you prefer, we will finish sample lots of hosiery sent us in the greige.

Our products include a complete line of Hosiery and Fabric Finishes, Dyeing Assistants and Scouring Agents. Amalgamated Field Representatives are experienced textile chemists ready to assist with any textile chemical problem. In addition, the complete facilities of our modern research and production laboratories are at your service for better fabrics, bigger profits. Write us today.

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Southern Division: 1819 Spring Garden Street, Greensboro, N. C.

Amalgamated

properties of the dyed material are very similar to those obtained by dyeing with vat dyes. Here again, the dye costs will be rather high.

Cotton Research Clinic

(*Continued from page* 149)

The oil is added in an emulsion and only .1% to .25% is needed, so that there is no reduction in yarn strength.

James N. Grant, of the SRRL in New Orleans, changed the subject from the discussion of silica and presented a report which described a number of physical properties of various chemically modified cottons. He showed, on slides, a large number of bar charts which differentiated between the physical characteristics of various yarns which had been chemically modified in several ways.

Processing Research. With George Dockray of the National Cotton Council presiding, the second afternoon session began with a paper on "Draft Distribution to Obtain Improved Roving and Yarn Uniformity," by C. L. Sens, of the SRRL, New Orleans, La. Mr. Sens has made a study on a number of models of roving frames to determine just what draft distribution is optimum for the production of the most even yarn.

He presented to the group a series of charts which gave a proper relationship between total draft and rear draft for various roving sizes. He also stated that the roving produced with the proper relation of rear to total draft for highest uniformity also produced yarn of higher strength.

It was at this point that E. A. Bentley, superintendent of Swift Manufacturing Company, Columbus, Ga., gave his report on the mill application of the Cen-Tennial Lint Cotton Opener and the use of higher card speeds, which has been mentioned. Experience at Swift has indicated that both the machine for opening and the higher card licker-in speeds are not only practical but offer manufacturing advantages. Publication of the detailed data of his report on higher card speeds will be in the near future.

Dr. Jack Compton of the Institute of Textile Technology described the use of electronic evenness testers, especially the Brush model, in mill testing. Of particular interest was his description of the technique used in determining the location of mill processing difficulties by reading the meaning of cyclic variations on uniformity meter charts. He also described the attachment used for measuring linear variation on laps and recording on standard uniformity testers.

Final Session. Four papers were heard at the final session of the Clinic on Friday morning. This session was under the chairmanship of J. B. Goldberg of J. P. Stevens & Co., Inc., New York. A. Mason Dupre of SRRL described the current cotton research being done at the Southern Regional Research

THE "JUNIOR CLEANER"

(Pat. Pend.)

Does a "Man-Size" Job!

For use between hopper and conveyor.
Delivers to regular cleaning line.
Completely opens and pre-cleans small amount of cotton delivered to each hopper in battery, so that machines in regular cleaning lines do *more cleaning* with *less staple breakage.*
Requires 43" between hopper and conveyor table.

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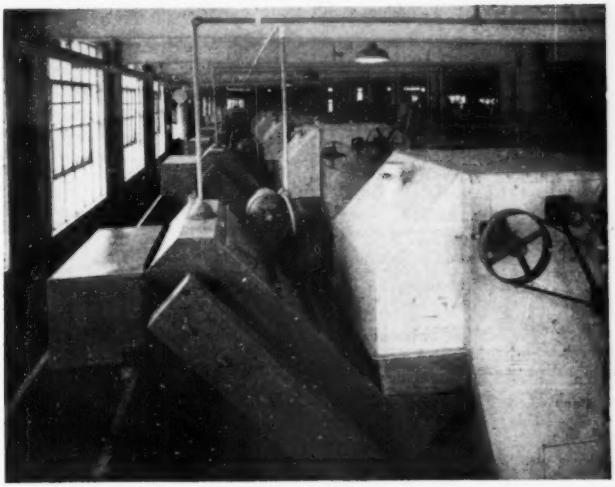
$950 each, f.o.b. Gastonia, N. C.
Lots of five or more, $900 each, f.o.b., Gastonia



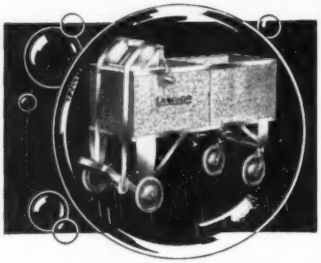
Shown above is a complete installation of "JUNIOR CLEANERS" in opening room of an Alabama mill.

Manufactured by

GASTONIA TEXTILE MACHINERY CO.

GASTONIA, NORTH CAROLINA

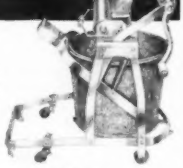
LAWLOR MOPPING TANKS



Lead the Field in RUGGEDNESS and SERVICE

8 styles and sizes of all steel, acetylene welded tanks • 2 or 3 compartments • 30, 60 or 65 gallon capacities • Hand or foot pressure wringers • Perforated roll wringers • Special drain shut-offs • Hot dipped, galvanized chassis and frames • Rubber tired, cadmium plated steel wheels.

LAWLOR MOP WRINGERS



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EASIEST turning wringer made: there are bearings at ends of rollers.

EASY to bring rolls together: foot lever is perfectly balanced.

EASY to move wringer: self-adjusting front casters raise metal feet from floor when you're ready to go.

The LAWLOR No. 2 accommodates any standard round, galvanized pail up to 16-quart capacity. Net weight of wringer—23 pounds.

LAWLOR No. 6 TWIN is like the No. 2 Wringer in general construction, but accommodates two pails.

Write for Catalog of Mopping Tanks, Wringers, Floor Scrub Wax-Polishing Machines for every kind and size floor.

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Quality Floor Equipment for 50 Years

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Laboratory in New Orleans. Herbert F. Schiefer and John Bogden described the projects at North Carolina State College in Raleigh, N. C., and Helmut R. Wakeham reported on the work now being done at the Textile Research Institute in Princeton, N. J.

Hearing these reports, any mill operator would be impressed with the work being done at these research institutes—work which will show up in the future in practical mill applications tending to reduce production costs and improve the quantity and quality of the product.

News in Brief

(*Continued from page* 93)

ment. The old stockings and socks were valued at a price much higher than the normal value for such second hand goods. The Frankfurt Amtsgericht (Court) has fined the firm 100 DM on the basis of a rebate law, whereby the acceptance of old stockings and socks in part payment represented a price reduction in the sense of the rebate law. It was proved, without objection, that the price reduction was in effect over the regulation 3 per cent which is permitted.

Carded Yarn Production. Carded cotton sales yarn spinners held a steady production rate during January; however unfilled orders dropped six per cent on a poundage basis.

Paper Thermometers. Thermal indicators made of paper instantly determine temperatures from 115 to 500 F in QMC applications. The thermometers consist of white pigment coatings on black paper. Each coating is designed to melt at a definite temperature. When one of the coatings is heated to its designated temperature, the white coating melts and disappears. The change from white to black is not reversible and therefore consti-

two great models for TESTING MOISTURE CONTENT

in wool, cotton, rayon and nylon

MODEL PD-1 for textiles in loose or compressible forms—3" penetration.

MODEL K-2 for textiles in cones, rolls, beams and similar forms.

10-DAY FREE TRIAL!

Try one of these moisture testing instruments for 10 days—use it, test it and prove its superiority. Send samples, moisture range and Purchase Order to cover trial period. No obligation!

QUICK, ACCURATE READINGS

In less than 3 seconds you can test moisture content of practically all types of textile materials, including cotton, wool, rayon and nylon in fabrics, packages and loose forms.

This portable instrument is designed for "on the spot" checks in your plant. Moisture Register is easy to operate—requires no technical knowledge or complicated figuring. Cost is negligible in comparison to advantages. Write today for complete details. Specify type of material to be tested.

MOISTURE REGISTER CO.

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ELECTRONIC MOISTURE REGISTER

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Miniature Beamer

A specially constructed miniature Cocker beamer has been installed recently in the Textile Research Department of American Viscose Corporation, Marcus Hook, Pa. The small beamer turns out miniature spools of 1 11/16-inch width ready for use either singly or in multiple for all standard-gauge sample tricot machines. The machine will be used to prepare warp beams for sample tricot machines used to knit sample fabrics for the company's customers and Fabric Development Department.

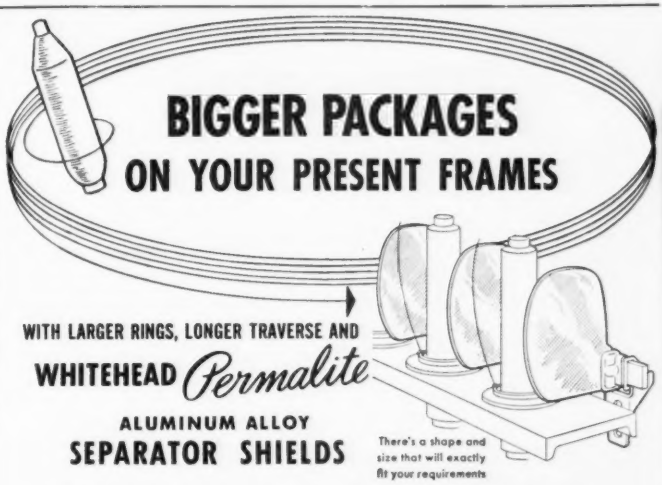
tutes a permanent record of the indicated temperature.

U. S. Machines in Austrian Mill. New equipment, financed by a $980,000 loan from Marshall Plan funds and $235,000 borrowed from the International Bank for Reconstruction, has been installed in the Walek & Co. spinning mill in Wiener Neustadt, Austria. More than 1,400 pieces of equipment were imported from the U. S.

Report Patents to Trade Magazines. An astonishing number of patents are granted to inventors scattered throughout every community from coast to coast. They are the hope of many people scarcely known beyond their own immediate environment. "Who will make and sell my idea?" or, "Who will buy my idea?" they ask. National Patent Council suggests that a few grains of business sense and salesmanship would help some of these dreams to materialize into successful reality. One thing the inventor could do would be to report his patented invention to the trade magazines related to the purpose of the invention.

New Dynel Plant. Carbide and Carbon Chemicals Company has announced that a dynel staple fiber plant, with a capacity of 20 million pounds per year, will be built at Spray, N. C., if the necessity certificate is approved.

Cotton Spot Market at Fresno. Effective March 21, 1952, Fresno, California, has been designated a bona fide cotton spot market under the Cotton Futures Act, as amended. Fresno is the first market in the far western cotton producing states to receive such recognition. The 12 bona fide



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WITH LARGER RINGS, LONGER TRAVERSE AND
WHITEHEAD *Permalite*
ALUMINUM ALLOY
SEPARATOR SHIELDS

There's a shape and size that will exactly fit your requirements

They're as strong as steel but many times lighter, reducing weight as much as 250 pounds per frame. This means you can use lighter travelers, reduce wear on rings, travelers, cams, worm gears and lifter-rod bearings. Save power, too.

Permalite Shields mount right on the ring rail and can be flipped back for doffing.

And with all their superiority Permalite Shields cost no more!

ENGINEERED TO FIT YOUR NEEDS—When ordering, specify rail width, thickness of back flange, and gage and number of rings in each rail on one side only, as 24-22-22-22-24.

EASY TO INSTALL—Simply drill and tap ring rail. We supply the shields and bar drilled to your gage and ring count, together with proper support hangers and all screws and washers.

Features that defy comparison

- Fewer ends down; some mills report 27% less
- Solid polished blades (not slotted) mean less wear on yarn. They collect less lint and fly, resulting in smoother yarn
- Less vibration—aluminum is self damping
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OVER 6,000,000 IN USE BY MORE THAN 350 MILLS

Immediate delivery from stock on all items

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Protection for Insulation

No insulating material can withstand repeated mechanical abuse; therefore special protection should be provided at points where insulation may be subjected to more than ordinary wear and tear, according to The Magnasia Insulation Manufacturers Association.

Insulation that is exposed to mechanical abuse may be protected by means of a sheet metal jacket which will protect the entire area from damage. The jacket may be tack-welded, or held in place with screws or bolts.

markets now designated are: Atlanta, Ga.; Charleston, S. C.; Augusta, Ga.; Montgomery, Ala.; Memphis, Tenn.; Little Rock, Ark.; Dallas, Lubbock, Houston, and Galveston, Texas; New Orleans, La.; and Fresno, Calif.

Technical Information Agency for Defense. The Armed Services Technical Information Agency has been established by the Defense Department. The agency will collect and catalog technical information for the military departments and will provide bibliographic service on scientific and technical reports for military agencies and their contractors.

New Silk Reeling Method in Hungary. Hungarian silk research establishments have recently introduced a new method for reeling from silk cocoons. The silk thread is drawn through a glass thread guide which is immersed in water at 40 C. During reeling the cocoon is immersed, thus the serecin is removed continuously.

Hosiery Pairer Counter Patented. A hosiery pairer counter has been patented by Charles W. Burns, Hickory, N. C. Objective of the invention (Pat. No. 2,545,763) is to provide a manually operable counter comprising a housing having a cover provided with an opening past which a portion of a rotatable disk is adapted to move as step-by-step rotation is imparted thereto through a manually operable plunger projecting from the cover. The disk has numerals thereon for indicating the number of times the plunger has been depressed by an operator in counting production items.

Strong Swelling Agent for Wool Fibers. According to Dr. E. I. Valko of the Polytechnic Institute of Brooklyn, and Gabriel Barnett of Warner-Hudnut, Inc., perfluorinated carboxy acids are the strongest swelling agents for keratin so far tested which apparently do not cause decomposition of the molecule. The chemicals cause wool fibers to swell, a change comparable to that which takes place in mercerized cotton.

Warp Knit Group Explores Standards. The Warp Knit Quality Group of the Underwear Institute met on February 5 to explore the possibilities of setting up standards of construction for tricot fabrics. Members of the group are: Robert Clark, Clark Brothers; William Hilleary, Southern Silk Mills; G. V. P. Marks, Julius Kayser & Co.; Hans Meinig, E. Richard Meinig & Co.; R. R. Rhines, Luxor Textiles; James Roger, Fulton County Silk Mills; Victor Schmidt, Queen City Textile Corp.; Philip Wick, A-Q Mills.

HOW ANDERSON SHIELDS INCREASE SPINNING ROOM EFFICIENCY

Spinning rooms using Anderson Shields save time and money, and prevent disruption when unnecessary breaking, chipping, and splitting of bobbins and spools is avoided. In a year's time these items alone can amount to a surprising sum . . . Insist on Anderson and get the best protection metal shields afford . . . Watch your spinning room efficiency increase!

TEXTILE SHIELD CO., INC.

Metal Protection for Wood Turnings

J. N. ANDERSON, *Treas.*

LAWRENCE, MASS., U.S.A.

New president of Ansonia Mills is **Edward J. Ziskind,** who succeeds the late Jacob Ziskind. **Chester A. Webbley** has been appointed controller of the company.

George E. Parkin, formerly with the Arms Textile Manufacturing Co., has been appointed resident manager of the Sheble & Wood Yarn Co., Salamanca, N. Y. He succeeds Harold Brooke.

The Mutual Security Agency in Washington has announced the appointment of **Dr. Rogers B. Finch,** Weumouth, Mass., as an engineering education consultant. Dr. Finch is assistant professor of textile technology and director of the Slater Memorial Research Laboratory at Massachusetts Institute of Technology.

C. A. Fox has retired as superintendent of the American Thread Co.'s Troutman (N. C.) plant. Mr. Fox began his career in textiles at the age of nine in the old Reinhardt Mill, Stanley, N. C., and has been at the Troutman plant since 1923.

The American Woolen Company has named **Jack Barry** as director of public relations and **Joseph P. Conlin** as director of industrial relations.

Frederick G. Brown, head of the group which purchased the Apponaug division of the Aspinook Corp. several months ago, has been elected president of the new company. He has been with Apponaug for 30 years, having been president prior to its coming under Aspinook control in 1950.

William Berry of Riegel Textile Corp., **J. E. Bradley** of Pacific Mills, **John C. Hughes** of McCampbell & Co., Inc., and **Herman D. Ruhm, Jr.,** of Bates Fabrics, Inc., have been elected to the board of directors of the Association of Cotton Textile Merchants of New York.

G. Harry Gwinnell has succeeded **Denis T. Noonan, Sr.,** as president of the Berkshire Woolen Co. Mr. Noonan is now chairman of the board. **Denis T. Noonan, Jr.,** was elected treasurer and re-elected vice-president; **W. V. Terhune** was also elected a vice-president.

Harry C. Templeton, general superintendent of the firm for the past eight years, has been appointed vice-president in charge of all production and assistant to the president of Botany Mills, Inc., Passaic, N. J.

Richard T. Chatham, Jr., was recently elected a director of Chatham Manufacturing Co., Elkin, N. C.

Dixie Mercerizing Co., Chattanooga, Tenn., has announced the following promotions: **Robert P. Cochran,** vice-president of spinning for all Dixie's plants; **T. L. Wilkey,** general superintendent of spinning operations; **L. T. Prigmore, Jr.,** assistant superintendent of spinning; and **William G. Agnew,** assistant superintendent of mercerizing.

D. G. Vander Fort, Valleyfield, Que., has been named manager of all the operations of The Montreal Cottons Ltd. He is succeeded as superintendent of grey mills by **C. S. Jones.** Both men prior to joining Montreal Cottons were with Dan River Mills.

Dial F. Sweeny, formerly with Mitchell and Smith, Inc. (cork products manufacturers), and later in the office of the Quartermaster General, is now supply officer for the Federal Civil Defense Administration, southeastern region.

Walter F. Wolfe, vice-president since 1945 and manager of the Philadelphia plant, has been elected president of Franklin Process Co., Providence, R. I. He succeeds **W. Allen Traver,** now chairman of the board. **Milton E. Davis,** formerly assistant manager, is now manager of the Philadelphia plant, and has also been made a director. **Clinton W. Dawson** was elected a vice-president and named manager of the Providence plant; **Albro N. Dana,** treasurer and secretary; and **Austin F. Matthews,** controller. **Tobert F. Strahley** is now

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As Production Engineers we specialize in the utilization of

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Our list of clients reads like the Blue Book of American Manufacture, and in our files are many expressions as to our service and results accomplished, like the following:

"They increased the effectiveness of our plant very much and we are well pleased with the results."

AN IMPORTANT MANUFACTURER OF COTTON YARNS

Write for a free copy of "Labor and Management Benefit by Industrial Engineering Principles," and our booklet "A Fair Day's Pay and in return A Fair Day's Work".

AMERICAN ASSOCIATED CONSULTANTS, Inc.

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RUGGED in design ... LIGHT in weight!
MILTON GIVES YOU TRUE DIMENSIONAL STABILITY without objectionable deflection or distortion!
it takes GOOD BEAMS to make good warps!
PROVEN IN SERVICE
warping unprecedented yardages of monofilament; fine denier, low turn nylon; and rubber yarns
MILTON NYLON & RUBBER TRICOT BEAM
Forged, heat-treated aluminum alloy heads and barrels permanently joined with continuous heliarc welds.
WITHSTAND EXCESSIVE PRESSURES
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MILTON MACHINE WORKS, Inc.
DESIGNERS — ENGINEERS — MANUFACTURERS
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Unlimited Opportunity for TEXTILE SALES ENGINEER

A client of ours has an unusual opening for a man — probably between 30 and 40 — capable of taking complete responsibility for the national sales organization and development of a full line of paper tubes, reeds, harnesses and allied items normally used on textile looms. The successful candidate for this position will become an important executive in a fast growing, fully established organization which manufactures and distributes textile machinery and supplies. He should, of course, have a textile engineering and sales background, a complete knowledge of the practical application of these products in mills, and an entree to and acquaintance with prospective buyers. His future will be limited only by his own capabilities and capacity to grow. Earnings can be set on any practical basis he suggests with provision for profit sharing and eventual stock ownership in the corporation. This is a genuine, opportunity-of-a-lifetime in congenial southern surroundings. Please reply by letter only (in strict confidence, of course) fully outlining your qualifications.

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374 DELAWARE AVE., BUFFALO 2, N. Y.

Personal NOTES ABOUT MEN YOU KNOW

manager of Central Franklin Process Co., Chattanooga, Tenn.

New officers of the Woolen Overseers Association of Eastern Maine are: President, **Ollie Howard** of Cowan Mill, Lewiston; first vice-president, **William Hughes,** Goodall-Sanford, Inc.; second vice-president, **Leeman Clark,** Pioneer Mills of American Woolen Co.; secretary-treasurer, **James Halliday,** Cascade Woolen Mills.

Robert H. McCarthy, Sr., has succeeded Dr. Daniel Cunning as president of Faith Mills, Inc., Averill Park, N. Y. **Arthur M. Butler** was named vice-president and general manager; **George F. Curley,** secretary; and **Joseph J. Maloney,** treasurer.

Fred Surr, formerly with John Alden Woolen Co., is now manager of the Sawyer-Regan Co., Dalton, Mass., in charge of all manufacturing operations.

Carlos White, formerly with Dundee Mills, is now lab technician of the newly completed testing laboratory at Opp-Micholas Mills, Opp, Ala.

At Lanett (Ala.) Bleachery & Dye Works, Inc., **A. D. Turner** was recently appointed superintendent of the dye works, with **Wyatt Kitchen** as his assistant. Other appointments are: **J. C. Papini,** superintendent of printing; **Lester Carruthers,** assistant; **Hope Tigner,** superintendent of corduroy finishing; **Claude Milford,** night superintendent; and **Roy Dowberry,** overseer of finishing.

Mason J. Florence has joined Riegel Textile Corp., to organize and manage a cotton department at Trion, Ga. The department will buy all the cotton used by the company.

Maitland L. Griggs, retired vice-president of Alexander Smith, Inc., is now director of the consumer durable goods division of the Office of Price Stabilization. **John Kravetz,** who joined Alexander Smith five years ago, has been named quality control foreman in the Velvet Mill. He replaces **Jesse de la Rama,** now acting assistant director of quality control. **Henry Mass,** assistant superintendent of the Yarn Mill, has retired after 44 years of service.

SYKES

Cloth Inspectors Provide Better Finished Fabrics

Model No. 200N

Sykes builds 20 different types of cloth inspection machines, each designed to do a particular job in your mill.

The Sykes No. 200 N with lighting encasement is a Constant Speed inspecting and measuring machine and is the ideal machine for inspecting cotton, rayon, nylon or plastic materials.

Sykes inspecting and measuring machines are standard equipment in many of the country's largest mills.

Let us know your requirements.

BUILDERS ALSO OF:

Burling machines Aluminum Tubing Rolls for Batching machines 1½" and 2" paper tubes. Steel Collapsible Rollers. And Inspection Tables to your own specifications.

Sykes Fdry. & Mach. Co.

Burlington, N. C.

P. O. Box 1178 Phone 4281

J. K. Schwartz, president and general manager of the Run-Prufe Hosiery Mills, has resigned to join another business enterprise. **J. R. Weatherford,** mill superintendent, has assumed the duties of general manager.

D. Bruton Fitzgerald is now overseer in the preparation department of The Seminole Mills, Statesville, N. C. He succeeds A. B. Wood.

Leslie L. Cobb, formerly with the Kodak, Tennessee Eastman, and Tenney organizations, has joined Textron, Inc., as technical assistant to R.

Mr. Cobb

L. Rogers, vice-president of Textron Southern. In addition to his other activities, Mr. Cobb has prepared processing articles for TEXTILE INDUSTRIES. He will make his headquarters in Anderson, S. C.

Oscar F. Ferguson recently received a gold and diamond service pin in recognition of 50 years of continuous service with Fieldcrest Mills. He is a foreman in the Sheeting Mill of the company. **Harold Squires** has been made assistant foreman of Blanket Inspecting on the second shift, succeeding **Rupert Riley,** now in the Bedspread Mill as assistant foreman of bedspread carding and spinning department on the first shift.

H. S. Van Ingen has been appointed managing director of Worth Street, Inc. He has been active for many years in the textile industry in the wholesale, converting, and manufacturing fields.

New president of Woolknit Associates, Inc., is **Kenneth N. Merrill** of Abbot Worsted Co. Vice-presidents are: **I. A. Wyner,** I. A. Wyner & Co.; **Phillip Leff,** National Spinning Co.; **Jack Davis,** Davis Yarn Co.; and **A. J. Stone,** Brooklyn Yarn Dye Co.

Holly Knit, Inc., Mount Holly, N. C., has announced the appointment of **Robert Patterson** to the newly

"Well Satisfied"

Say Nathan Schwartz & Sons.

This firm has three Taylor-Stiles thread waste cutters:

1. **A No. 36 cutter—rated capacity 2 tons an hour—shown cutting nylon waste.**

2. **A No. 15 staple cutter, shown cutting nylon sliver into uniform lengths for staple.**

3. **A "Giant, Jr.," a smaller capacity cutter for general purpose cutting.**

There's an efficient Taylor-Stiles cutter for every textile cutting purpose. Let us know your cutting needs for full facts about the machine to fill them.

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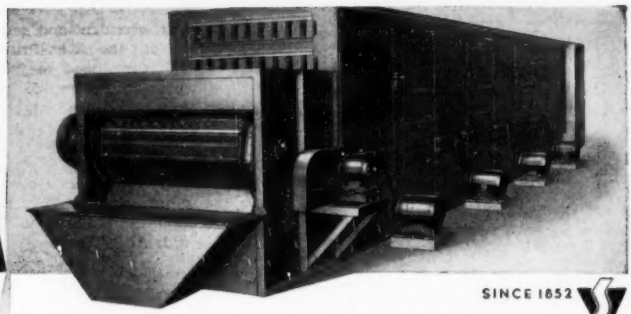
CUTTING MACHINES & KNIVES

2041 Bridge Street, Riegelsville, New Jersey

for WOOL, COTTON, RAYON and other Synthetics and LOOSE MATERIALS



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SARGENT'S CONTRA-FLOW Single Apron Dryer

Employs the counter-air-flow heating principle to provide rapid, economical drying.
New, fast, completely automatic.
The material and the air drying it enter the dryer at opposite ends and travel through in opposite directions. Wet material is subjected first to wet, hot air, then progressively to dryer, cooler air, emerging DRY, at ROOM TEMPERATURE.
No heat loss . . . No overheating of dry material.
The most efficient machine ever developed for drying loose materials.
For complete information please write for Bulletin No. 183.

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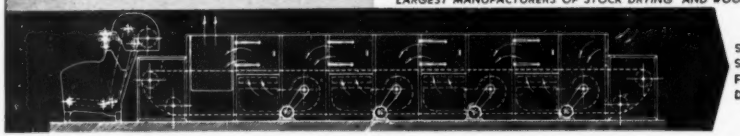
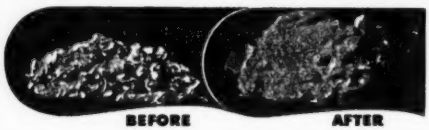
Graniteville, Massachusetts, U.S.A.

LARGEST MANUFACTURERS OF STOCK DRYING AND WOOL WASHING EQUIPMENT IN AMERICA



Schematic diagram of the SARGENT CONTRA-FLOW SINGLE APRON DRYER showing direction of travel of air through fans and heating elements. Material travels in opposite direction.

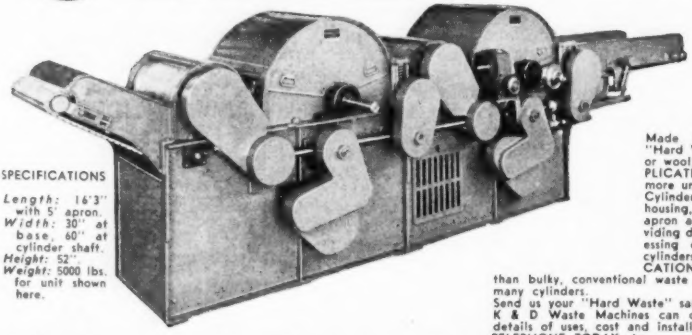
You can now whip your "HARD WASTE" problem with the new



BEFORE AFTER

K&D TANDEM APPLICATION WASTE MACHINE

LEFT above is hard twist unsized cotton warp waste. RIGHT—the processed waste after one time through K & D Tandem Unit. Many mills, pleased with such results from first installation, have ordered additional units.



SPECIFICATIONS
Length: 16'3" with 5' apron.
Width: 30" at base, 60" at cylinder shaft.
Height: 52".
Weight: 5000 lbs. for unit shown here.

Made for processing unsized "Hard Waste" in cotton, rayon or wool, this new TANDEM APPLICATION combines two or more units of the K & D Single Cylinder Waste Machine in one housing, with only one feed apron and one exit apron. Providing double-action waste processing on each of the unit's cylinders, the TANDEM APPLICATION is far more efficient than bulky, conventional waste machines with twice as many cylinders.
Send us your "Hard Waste" samples for proof of what K & D Waste Machines can do for you. Ask us for details of uses, cost and installation. WIRE, WRITE, or TELEPHONE TODAY, to

Kirkman & Dixon MACHINERY COMPANY
GREENWOOD, SOUTH CAROLINA

K & D SINGLE CYLINDER WASTE MACHINES • F-5 HOPPER FEEDERS, ANY WIDTH • SARGENT COMBS

Suggests Educating Public on Value of Fire-Resistant Fabrics

Nation-wide legislation requiring textile mills to treat certain combustible fabrics so as to render them fire resistant is needed, in the opinion of Dr. James M. Church, an associate professor of chemical engineering in Columbia University's School of Engineering, who has been working for more than five years on fire-resistant treatments of clothing and other fabrics for the Army Quartermaster Corps. He was interviewed recently in connection with the recent outbreak of fires caused by brushed rayon garments.

"The combustibility of any materials," said Dr. Church, "depends on the type of fiber used and the weave of the fabric. Cotton, for example, is one of the most combustible clothing materials—especially the fuzzy-textured flannelette frequently used in pajamas. Wool, on the other hand, is not usually combustible unless spun very fine as in light worsteds. In general, fabric that is tightly twisted and closely woven is less apt to catch fire."

Manufacturers and processers of fabrics are not always to blame for the frequent clothing fires that occur, it was pointed out. "Many people apparently mistake 'flame-proof' or 'flame-resistant' for 'non-combustible' when they think of treated fabrics," the engineer explained.

Dr. Church explained why fire-resistant processes are so difficult to develop, particularly for clothing. One of the thorniest problems, he said, is preventing fire-resistant compounds from being removed from clothing—by perspiration, rain, and especially laundering. An equally perplexing problem is finding a fire-resistant compound that won't detract from ordinary fabric qualities.

Textile manufacturers are loath to adopt flame-retarding compounds more widely, according to Dr. Church, because the process adds materially to the cost of a highly competitive product. Apparently the public needs more education in the value of fire-resistant fabrics to overcome price resistance, he said.

Newest venture in this field, says Dr. Church, is a promising "resin impregnation" process. Previous attempts to bond resins right into fabric have failed because the resins themselves were inflammable or left the fabric stiff and boardy. This new resin process, discovered by a former Austrian chemist, has now been perfected and provides excellent, durable fire-resistance as well as flexibility suitable for clothing.

The ideal flame-resistant treatment, concluded Dr. Church, is one that stays with the fabric for its life-time—like the dye that gives material its color. It should stand up through constant use and laundering without altering either the appearance or "hand" of the fabric.

created position of general manager. He will divide his time between the New York sales office and the Mount Holly plant. Before joining Holly Knit Mr. Patterson was with Beaunit Mills.

Elected to the technical advisory board of the Institute of Textile Technology recently were: **John S. Kenrick,** vice-president in charge of research and sales development for Aberfoyle Manufacturing Co.; **A. H. Randall,** vice-president of Alabama Mills; **Robert W. Philip,** vice-president of Callaway Mills Co., and **A. Marshall Mosley,** technical superintendent of Thomaston Mills.

Textron, Inc., has announced the following appointments: **James E. Robison,** president of Textron Puerto Rico and president, Textron Mississippi, Inc., to succeed **Royal Little,** now chairman of the board of both companies; **James M. Flack,** executive vice-president of Textron Mississippi; and **Edwards C. Whitmore,**

EXCEL

No Rust...
No Snagging
With Excel #600
Slatted
Conditioning
Trucks

Brass screws and cadmium plated bolts eliminate any possibility of rust. Because they are fastened from the outside they also insure against snagging. The Excel No. 600 is constructed of highly polished cypress or maple and finished with two coats of heat and acid resistant Tropelite to form a durable snag-proof surface. Slatted sides, ends and bottom permit perfect saturation and drainage.

Casters are securely bolted to bottom of truck.

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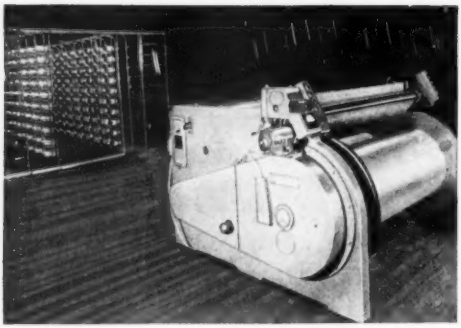
EXCEL

Textile Supply Co.

"Excel Trucks Excel"

LINCOLNTON, NORTH CAROLINA

High Speed SIPP-EASTWOOD WARPER Now Available with choice of drives.



This warper may be had with *fully electronic drive* (for extremely accurate control of yarn speed) — or with *Rider Roll Rheostat type drive.*

The High-Speed Sipp-Eastwood Warper with its choice of drives, sturdy, extra-heavy construction, smooth application of power, spindle-driven beam, and dependable V-belt drive makes for more efficient operation. Its speed is only governed by the yarn.

OUTSTANDING FEATURES:

1. *Spindle driven beam builds up to 36" in diameter, 54¼" wide, or wider.*
2. *Electrically operated hydraulic brakes, automatically adjusted to beam load.*
3. *Variable finger-tip speed control, effective to as close as 1%.*
4. *Hydraulic beam doffing.*
5. *AC current only required.*

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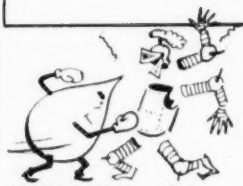
TANNER TEXTILE CHEMICALS



VERSENE FE 3 Specific*
Most powerful iron complexing agent known in normal pH range.

VERSENE*
Most efficient general complexing agent. Softens water completely and permanently without precipitation.

• • THE *Versenes**

VERSENE T*
Prevents and removes iron deposits from fabric treated with concentrated caustic.

VERSENE FE 3*
Prevents hard water deposits and iron stains.

VERSENES AND TEXTILES

The Chas. S. Tanner Company, as Southern Agents for the Bersworth Chemical Co., now offers you the Versenes in the South. By controlling metallic contamination, these most modern of chemicals give *cleaner* fibres, *softer* woolens and visibly *whiter* cottons. Among other things, they completely soften hardest water without precipitation.

OTHER TANNER CHEMICALS

Suedex Series.
These Resin Emulsions are semi permanent and easy to use in process finishing. Color yield is excellent and they give varying degrees of stiffness, fullness and finish on broadcloth and cottons of 80 squares.

Crystal Film.
These are Co-polymer type resins. They give beautiful transparent finishes. There are four types. Similar to Suedex in function but are used where even finer finishes are desired.

Ether Gum Binder.
For all types of clay or talc fillers for cotton goods. Non-yellowing properties.

Tantex A and Tantex B.
The *Durable* Type Water Repellent. Cottons treated the single bath Tantex way will retain their repellency for 3 washings or 3 dry cleanings. It will pay to investigate.

CST Gum No. 5.
A weighter type material. Used as a finish but imparts much weight to the fabric.

Tanamine Series of Softeners.
This is a complete line of cationic, anionic and non-ionic softeners.

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CHAS. S. TANNER CO. *manufacturing chemists*
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How to Process Fire Retardent Cotton Goods

The goods must be thoroughly absorbent; a good kier boil or its equivalent is required. The reason for this is that every fiber in the yarn must be thoroughly treated or a flame igniting the goods will search out a weak spot and the fabric will burn.

Next, if the goods are dyed or printed, this must be done with fast colors. The Pyroset* solution is applied on a mangle from water solution and obviously if direct colors are used and they bleed, there will be a loss of shade in running through the Pyroset bath. Other factors in getting good results are the use of a three-bowl hydraulic mangle, adequate pressure, and the use of two nips and two dips obviously give a better result than one each. Care and thoroughness pay off in getting a good thorough impregnation just as they do when pad dyeing similar goods, for example.

Perhaps the most exacting part of the procedure is the making up of the Pyroset bath. To do so on the basis of 100 pounds of solution, 30 pounds of Pyroset are stirred into a slurry with about 25 pounds of water at 110 F and 10 pounds of 85% phosphoric added to this. Mechanical stirring is advisable as success lies along the narrow path in having enough heat to dissolve the concentrated salts and not too much to start breaking it down with the active evolution of formaldehyde. If the temperature rises above 115 F, more cold water or even cracked ice is added. If it drops below 100 F, Pyroset DO will not readily dissolve.

Where greater durability is desired, the addition to the pad bath of 4 to 6 pounds of a melamine resin such as "Aerotex" Resin M-3 is recommended. Where a greater flexibility and water resistance are needed, add a like amount of "Permel" Resin N, a durable water repellent. Incidentally the addition of Permel Resin N will not help the spray rating but it will cut down markedly the dynamic absorption.

After the cloth is impregnated on the pad with the aforementioned solution, it is dried and ready for curing to fix it and make it durable. This must be done at about 300 F and at that temperature will take three or four minutes. If the curing oven is held at 350 F, time will be shortened and production speeded up accordingly.

At this point the goods are rather stiff and brittle so that a loop type of curing oven may give trouble as the cloth will not drape properly. A roller type with driven rollers is more suitable, or even specially heated tenter frames. Some plants are using an infra-red heating unit as a booster. After curing, the goods should be rinsed, preferably in rope form, to get them soft and pliable and remove the excess catalyst and uncured resin.

There is a slight lightening of the shade and faint yellowing due to the Pyroset treatment. This change of shade with vats, naphthols, indigosols, and other fast colors is not serious, but it is appreciable where a stylist or color expert is extremely critical. In such cases exact matches can be obtained by over-dyeing or over-printing with perhaps 10 or even 25% more color, and a reduction in the yellow component, if present.

Kenneth H. Barnard, American Cyanamid Co., Bound Brook, N. J., before the Dec. 8, 1951, meeting of the Southeastern Section AATCC.

*Pyroset DO Fire Retardent, a product of American Cyanamid Co. A fire retardent of the durable type, it is an organic phosphate which seems to react with cellulose to fix 5 to 7% nitrogen and around 2% phosphorus on the goods, thus rendering them slow burning.

executive vice-president of Textron Puerto Rico. **B. W. McKenzie** has been named plant superintendent of the new Textron Southern Inc., mill at Honea Path, S. C.

Henry A. Coxe was recently promoted from weave room supervisor to plant superintendent at United Rayon Mills, Elberton, Ga.

W. H. Bollin, with the firm since 1914, was recently elected vice-president of Washington Mills, Winston-

Orr SLASHER Cloth

With Special Chemical Treatment

Something New and Better

● Slasher Cloth is an important maintenance item in a cotton mill. With the introduction of ORR Slasher Cloth with Special Chemical Treatment, many of the problems which have pestered the slasher room foreman have been eliminated.

The slasher room foreman, in order to satisfy the superintendent and the cost department, must have available a Slasher Cloth that:

1. Dresses the yarn properly.
2. Holds its width. No shrinkage.
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ORR Special Treated Slasher Cloth maintains uniform dressing properties, resists bacteria and steam degradation, maintains dimensional stability. Discuss your Slasher Cloth problem with your ORR representative.

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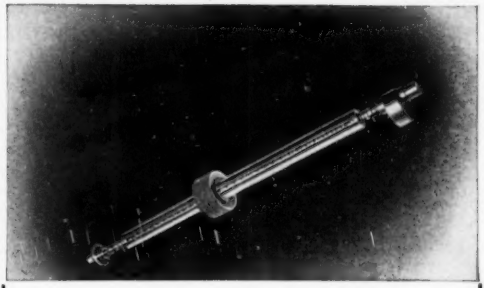

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Roy service engineers—card grinding specialists—are always at your service. They will go to your plant to work out your card grinding problems, check your machinery, give you constructive information on grinding bare cylinders or card wire.

Maintenance is top importance now.

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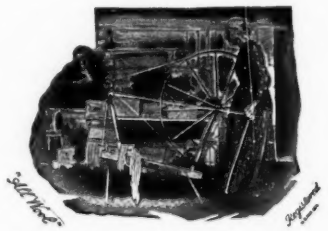

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ENDLESS BLANKETS RAYON SLASHER JACKETS
ENDLESS REVOLVING CLEARERS

EDWARD H. BEST & CO.

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Salem, N. C. **Lawrence G. Reid** was made assistant secretary.

I. B. Grainger, Jr., has been made plant manager of Full-Knit Hosiery Mills, Inc., Burlington, N. C., according to Chadbourn Hosiery Mills, Inc., parent company.

John L. Severance, secretary of the Association of Cotton Textile Merchants of New York, has been appointed lecturer for courses in merchandising of textiles during the spring semester at the Philadelphia Textile Institute.

S. A. Summey, who began his textile career as a sweeper 58 years ago, has retired as superintendent of the Alexander Mills plant at Alexander, N. C. On his retirement Mr. Summey became a member of the advisory board of the plant.

J. D. Phillips has been made overseer of weaving at Monarch Mills, succeeding W. C. Lynch, now with Brighton Mills. **L. C. Ellis** is now assistant superintendent of the Monarch plant in charge of carding and spinning; and **W. D. McBee** succeeds Mr. Ellis as overseer of spinning.

Personal NOTES ABOUT MEN YOU KNOW

Obituaries

Robert E. Hightower, 63, president of Thomaston (Ga.) Mills, died on March 12.

Taylor R. Phillips, 41, president and general manager of the American Textile Co., Inc., died in Boston after several weeks' illness.

On February 18 **Walter J. Crocker,** 46, died of injuries sustained in an accident in his home. Mr. Crocker was chief dyer at Empire Worsted Mills, Jamestown, N. Y.

Harry A. Matthews, 46, general manager of the Belvidere (N. J.) Hosiery Mills, Inc., died recently.

Funeral services were held on February 22 for **Frederick H. Wandelt,** 60, vice-president of John P. Maguire & Co., Inc., New York.

William H. Prendergast, 58, vice-president and sales manager of William H. Prendergast Mills, Bridgeton, R. I., was fatally injured in an automobile accident.

John Wyckoff Mettler, president of the Interwoven Stocking Company, died suddenly on February 13.

Lincoln Cromwell, 86, recently retired board chairman of William Iselin & Co., Inc., died in February after a short illness.

Active in southern textile industries for many years, and resident of Lafayette, Ga., **W. A. Enloe, Sr.,** 71, died on February 10 while on a vacation trip to Florida.

Morris E. Leeds, founder and chairman of the board of Leeds & Northrup Co., died on February 8 at Lake Wales, Fla. He was 82 and had been ill for several weeks.

Ray W. Longfield, vice-president of The Darnell Corp., Ltd., passed away at Long Beach, California.

A. G. Peterson, 64, general sales manager of the eastern division, Corn Products Refining Co., died suddenly on February 11.

James E. Cunningham, head of spinning at the Wuskanut Mills in Farnumsville, Mass., until his retirement in 1936, died recently at the age of 89.

On January 12 **Dudley B. Setzler,** 41, died in Columbus, Ga., while on a business trip. He was division representative of the Dexter Chemical Corp. in Georgia, Alabama, and Tennessee.

Earl E. Groves, active in textiles since 1920 and currently treasurer of Groves Thread Co., Gastonia, N. C., died on February 13 after a lengthy illness.

George W. Paxton, 70, retired textile chemist, died in Charlotte, N. C., on February 8. He was for many years with Industrial Cotton Mills, Rock Hill, S. C.

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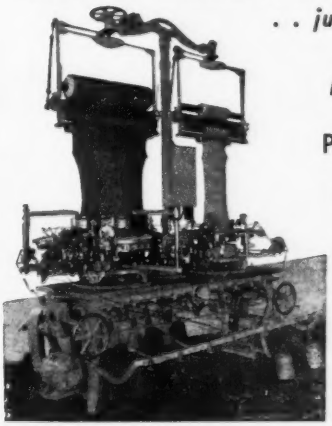
NO FANCY CLAIMS

. . . just down-to-earth good quality cloth at high production speeds and rock bottom costs PLUS fabric versatility!



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- JERSEY CLOTH
- TERRY CLOTH
- POROUS FABRIC
- SINGLE & DOUBLE PLUSH with single or double backing

. . . and others!

DOUBLE HEAD MODEL D-2 is equipped with individual motor and drive for each head. New stop motion with furnishing wheels control each end of yarn and prevent imperfect feeding of yarn to needles. Yarn tension always remains constant and steady for delivery from furnishing wheels. Optional equipment available include a 3-color (3-thread) striper as well as a foolproof pattern attachment for putting in or taking out a pattern.

WRITE FOR COMPLETE DATA ON THE ENTIRE TOMPKINS LINE!

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SAVE the Expense of Hand Washing with the No. 89 Nash AUTOMATIC BOBBIN WASHER

Washes flanged bobbins at 28 pieces per minute!

Textile mills throughout the country are finding the Nash No. 89 a time and money saver. It's a ten-spindle machine that does the entire washing and wiping operation automatically from start to finish. Eliminates the time and expense of hand washing. No dirt is left on the bobbin which would soil the yarn on the finished fabric. The cleaning solution used has a 140-degree flash point and is not toxic, assuring safe machine operation. The solution has no harmful effects on yarn, either natural or synthetic.

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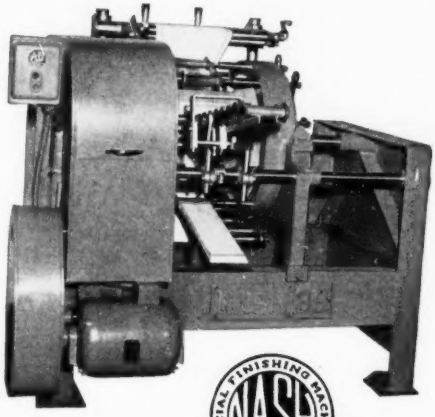

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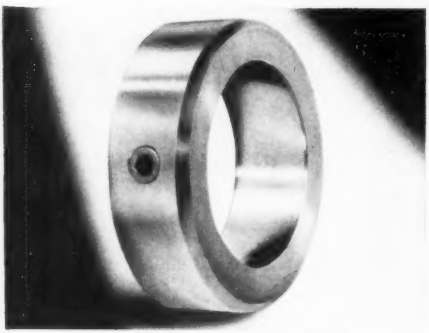

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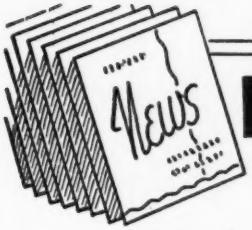

HELPFUL Booklets FREE

Here is the "cream of the crop" of literature on textile subjects as prepared by TEXTILE INDUSTRIES' advertisers to aid in mill operation and management. These reference books and catalogs are free for the asking and there is no obligation involved. Read through the list carefully for booklet on the subject or new Equipment in which you are interested. Then fill in the numbers of those desired on the coupon on page 258 and mail it to TEXTILE INDUSTRIES. ("First Listings" shown below are not confined solely to TEXTILE INDUSTRIES' advertisers.)

This service is restricted to those engaged in operation and management of textile industries.

4-1. Measuring Machine. New leaflet describing Trumeter's ribbon and tape measuring machine is available. Adjustable guides for different widths of materials discussed, along with pictures and some of the mills that are using the machine. Trumeter Company, 1265 Broadway, New York 1, N. Y.

4-2. Maintenance Coating. Leaflet describes Parvinac maintenance coating as being a development to meet the needs of industry for a coating which would not only give a pleasing appearance but also protection against corrosion from atmospheric conditions, vapors, fumes, spillage and splash of chemicals which destroy valuable and expensive machinery and equipment. Ease of application, how this coating meets industry's needs, and the various colors available also discussed. Duramite Chemical Company, Inc., English St., High Point, N. C.

4-3. Maple Flooring. Building owners contemplating modernization programs this year, can save money on their hardwood flooring requirements if they select the "thrifty" third grade of Northern Hard Maple. Second grade maple flooring is also a money saver in industrial plants. Illustrated leaflets describing the economical use of these lower grades are now available for distribution to the general public. Maple Flooring Manufacturers Association, 548 Pure Oil Bldg., Chicago 1, Ill.

4-4. Waste Machines. New brochure describes the CMC Waste Machines as being the most modern on the market and processing many important patented features. Also pictures and describes the CMC cleaners and blenders for cotton, synthetics, and blends. Cutaway diagrams and engineering on each. Carolina Machinery Company, Inc., 5019 Wilkinson Blvd, Charlotte 1, N. C.

4-5 Condensifilter. The Hankison Model B-30 Condensifilter, a device which dehydrates and cleans compressed air used for operating instruments, is detailed in a new two page bulletin. Measuring 15" by 9" in diameter, it combines in a single compact unit a mechanical filter, a dehydrator and an automatic trap. Removes oil, oil sludge, scale, other foreign materials and vaporized water from the air. Hankison Corporation, 405 Benton Building, 1501 Beaver Ave., Pittsburgh 33, Pa.

4-6. Air Systems. Bulletin No. 30 entitled "Ross Air Systems for the Textile Industry," is a complete treaties on this company's heating, ventilating, drying, cooling and conditioning systems. Pictures of installations and a full explanation of each system, with cutaway diagrams and engineering data. J. O. Ross Engineering Corporation, 444 Madison Ave., New York 22, N. Y.

4-7. Production Power. A 40 page catalog and manual featuring leather belting, newly released by Graton & Knight, which is complete and timely. Charts and tables show horse power ratings, belt speeds, specifications of controlled tension bases, use of automatic clutches, along with a set of formulas showing the engineer how to figure the belting needs for every job. Well illustrated, and a useful addition to the files of anyone interested in power transmission. Graton & Knight Company, Worcester, Mass.

4-8. Materials Handling. A new 16-page booklet which comprehensively covers the use and application of hardwood pallets for every phase of industrial materials handling has been released by the National Pallet Corporation. Job-engineered and standard type pallets are illustrated with suggested uses, load limits and other data. National Pallet Corporation, Oliver Bldg., Pittsburgh, Pa.

4-9. Explosion-Proof Motors. Construction details of Allis-Chalmers explosion-proof, fan cooled and non-ventilated motors are described in a new bulletin. Said to be suitable for use where there is dust, dirt, fly ash, rain, snow, or corrosive gases, due to the elimination of enclosed external air passages which makes the motor easy to keep clean. Allis-Chalmers Manufacturing Company, 1054 S. 70th St., Milwaukee, Wisc.

4-10. Tank Lining. New four-page bulletin discusses, illustrates and gives engineering data on application of flexible Koroseal to lining tanks, vats, etc. Typical materials handled include nitric, sulfuric and chromic acids, bleaches, ammonium hydroxide, barium sulfide, caustic plating solutions and many organics. Typical service is illustrated by a tank installed in 1937 which has been handling 10-20% nitric mixed with 1-2% hydrofluoric, according to the bulletin. Metalweld, Inc., 26th and Hunting Park Ave., Philadelphia 29, Pa.

4-11. V°S. Drive Bulletin. New booklet pointing out the efficiency-improving, cost reducing advantages that packaged, all-electric, adjustable-speed drives bring to a wide range of production machines and processing equipment. Presents a simplified, non-technical explanation of the Reliance V°S Drive in providing adjustable speeds from AC circuits. Reliance Electric & Engineering Company, 1088 Ivanhoe Road, Cleveland 10, Ohio.

4-12. Combustion Control. New 24-page three-color booklet entitled "Bailey Air-Operated Combustion Control" is a detailed account of tried-and-proven automatic combustion control techniques for oil and gas fired boilers. Nine typical firing methods and 16 major control equipment components are described with illustrations and schematic diagrams. Bailey Meter Company, 1050 Ivanhoe Road, Cleveland 10, Ohio.

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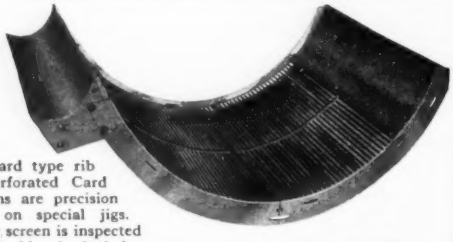

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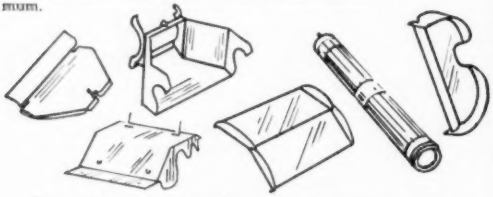

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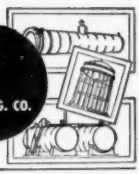

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20 **VISION TESTING EQUIPMENT**—Pamphlet entitled "What You can Expect From a Good Vision Program," written by a prominent personnel director. Also circular describing the Keystone Occupational Visual Service.—KEYSTONE VIEW COMPANY, Meadville, Pa.

21 **CHROMIUM PLATING**—New booklet tells how Walhard engineered hard chromium plating service works for industry. Walhard's capacity to produce, controlled quality, and economical operation are discussed along with pictures of the operations.—WALTON AND LONSBURY, Attleboro, Mass.

PLANT AND PLANT MAINTENANCE

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137 **PUMPS AND COMPRESSORS**—Bulletin Q P-11 presents the standard types of Gardner-Denver air compressors, centrifugal pumps, steam and power reciprocating pumps in a brief and comprehensive manner to enable the prospective user to select the size and type for specific needs.—GARDNER-DENVER CO., Quincy, Ill.

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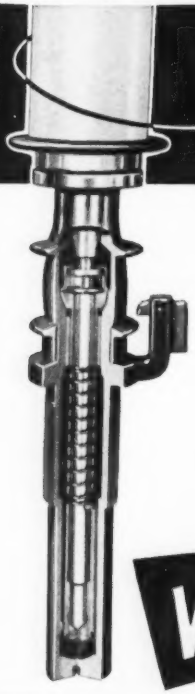

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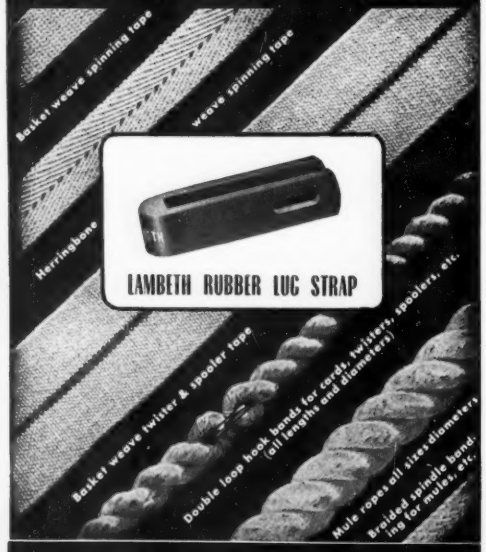
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218 **BALL BEARINGS FOR TEXTILE MACHINERY** —A 40-page catalog illustrating Fafnir Ball Bearing units for replacement or new applications in all phases of textile processing.—THE FAFNIR BEARING CO., New Britain, Conn.

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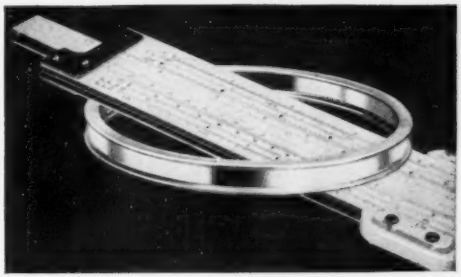

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266 LUBRICATION — Bulletin BG2-DC, describes properties of Silicone greases used in motors at high speeds and temperatures, on oven conveyors, tenter frames, can dryers, etc. Decrease by 10 to 1 in re-lubrication requirements described.—DOW-CORNING CORP., Midland, Mich.

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316 HYDRAULIC POWER UNITS — Literature describing hydraulic unit, motor, pump, reservoir, valving a small compact unit for operating of hydraulic calenders, presses, hydraulic controls, etc.—B. F. PERKINS & SON, INC., Holyoke, Mass.

321 RED-RAY BURNERS—Bulletin describing use of Red-Ray Burners in preheating and partial drying to increase capacity of frame.—RED-RAY MFG. CO., 445 W. 45th St., New York, N. Y.

334 TEXTILE MILL INSTRUMENTS — Eight-page bulletin 98180 describes the use of automatic control instruments used on such processes as size cooking, storage kettles, size boxes, slashers, dye vats and driers. —TAYLOR INSTRUMENT COS., Rochester, N. Y.

CARDING, SPINNING, WINDING

402 AUTOMATIC CLEANING AND OVERHEAD HANDLING FOR TEXTILE MILLS—24-page bulletin describing the American Monorail Automatic Cleaner for preventing accumulation of lint on spinning, twisting, winding and warping machines. Also for cleaning monitors and card room ceilings.—THE AMERICAN MONORAIL CO., Cleveland, Ohio.

408 CARD GRINDING INFORMATION — Outlines care of grinders, instructions on speed to run grinders, amount of oil to add to machine and other pertinent information.—B. S. ROY & SON CO., Worcester, Mass., and Charlotte, N. C.

416 THE BRIEF SAGA OF THE RING TRAVELER —An interesting history relative to the ring traveler, which is in reality the basis of the spinning frame. John Thorpe's invention of ring traveler, the development of the spindle, and the invention of Rabeth's Bolster type spindle are covered. — NATIONAL RING TRAVELER CO., Pawtucket, R. I.

419 TEXTILE APRONS—Illustrated folder showing the steps in manufacture of genuine leather aprons for all types of long draft spinning and card room machinery.—TEXTILE APRON COMPANY, East Point, Ga.

427 WINDING AND CREELING WARP YARNS — Universal's Bulletin No. 442 contains an interesting treatment of this subject.—UNIVERSAL WINDING COMPANY, Providence, R. I.

430 DIXON DATA — Dixon house organ entitled "Dixon Data," which is available in a new form every other month. These house organs contain information on spinning problems as they relate to saddles and component parts. — DIXON LUBRICATING SADDLE CO., Bristol, R. I.

432 PRECISION TEXTILE WINDING — Bulletin on Kidde Tensions and Density Control for winding rubber cones.—WALTER KIDDE & CO., INC., Belleville, N. J.

436 MAINTENANCE INFORMATION FOR YOUR SCOTT TESTER—Booklet containing maintenance

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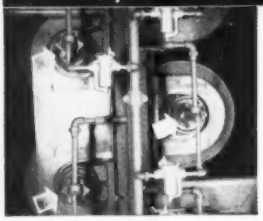

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data for calibration of Scott Testers, clamps for testers, gear-box lubrication and recording.—SCOTT TESTERS, INC., Providence, R. I.

437 **SPINDLE TAPE LACING EQUIPMENT**—Circular No. 54 illustrating and describing the Clipper method of joining spindle tapes. — CLIPPER BELT LACER CO., Grand Rapids 2, Mich.

438 **HEADLESS PACKAGE TWISTER ELIMINATES REDRAWING**—Literature shows high-speed Face Drive Twister for accurately building tapered or straight-end headless packages which go direct to quilling or warping without redrawing.—U. S. TEXTILE MACHINE CO., Scranton 8, Pa.

443 **COMPARATIVE YARN TABLE** — Chart giving woolen number (cut and run system), also cotton worsted and metric system; also, Comparative Rayon Denier Yarn Table.—VICTOR RING TRAVELER CO., Providence, R. I., and Gastonia, N. C.

445 **ROLLER BEARING SPINDLES**—Illustrated booklet showing various types of Marquette Roller Bearing Spindles. The unique full-floating footstep bearing is pictured in cut-away views, and its advantages are described. — THE MARQUETTE METAL PRODUCTS CO., 1145 Galewood Ave., Cleveland, Ohio.

446 **WINDING MACHINES**—Principles and Practices is the title of Bulletin No. 339. Part 2 on the No. 44 Roto-Coner is profusely illustrated with exploded view drawings with charts and tables relative to drum winders.—UNIVERSAL WINDING CO., Providence, R. I.

WEAVING, SLASHING

509 **MULTI-MOTOR SLASHER DRIVES** — Booklet designed to bring the descriptive information on multi-motor slasher drives up to date, and emphasize the improvement in the drive through the use of Rototrol for the control of winding tension.—WESTINGHOUSE ELECTRIC CORP., 511 Wood St., Pittsburgh 30, Pa.

512 **LOOM PRODUCTION CALCULATOR** — Handy pocket slide rule available for computing per cent efficiency of a loom. Simply set operative hours and loom speed and the per cent efficiency can be read on the side opposite the pick counter reading.—VEEDER-ROOT, INC., Textile Counters Div., Hartford 2, Conn.

518 **NIAGARA TWIST-SETTER** — Folder describing the revolutionary Niagara Twist-Setter which has no moving parts. This yarn is sprayed from all sides to afford maximum economy.—SEYDEL-WOOLLEY & CO., 748 Rice St., Atlanta, Ga.

521 **STEEL WARP BEAMS** — 20 page Catalog No. 45 illustrating Standard and Special Purpose Warp Beams for the weaving industry, both broadloom and narrow fabrics. Also Textile Machinery Specialties.—MILTON MACHINE WORKS, INC., Milton, Pa.

524 **JOHNSON WARP SIZES**—12 page fully illustrated booklet, describing the 7 cylinder sizer with stretch indicator and finger-tip control of stretch. A point- by-point analysis.—CHARLES B. JOHNSON MACHINE WORKS, Piercy & Holsman Sts. Paterson, N. J.

529 **STRAPPING**—Looms and harness strapping, complete line. Full information supplied on request. —TON TEX CORPORATION, 16 West 61st St., New York 23, N. Y.

530 **ROTARY UNIONS**—New catalog shows how to cut costs, get better sealing, on can dryers, slashers, calenders, etc. Catalog No. 500 entitled "Where Good Connections Count."—PERFECTING SERVICE COMPANY, Atando Ave., Charlotte, N. C.

531 **EVENNESS TESTER**—Folder explaining how this Tester takes the guess out of quality control and each processing step from carding through spinning.—USTER CORPORATION, Charlotte, N. C.

DYEING, FINISHING, CLOTH ROOM

604 **STABILON** — For Napthol Dyeing and Printing —reduces cracking and brightens Napthol shades by stabilizing fast color salts and bases. Presents premature decomposition of stock feeder solutions and print pastes—fully discussed in booklet available.—AMERICAN ANILINE PRODUCTS, INC., 50 Union Square, New York, N. Y.

615 **HIGH PRODUCTION EXTRACTOR FOR RAW STOCK—YARN—HOSIERY**—Descriptive bulletin and full information on automatic Twintainer Extractor with bottom-unloading removable baskets. Machine replaces three conventional extractors, lowers labor costs. —FLETCHER WORKS, INC., Philadelphia, Pa.

616 **FINISHING DRIVES** — 32-page booklet covers complete drives Westinghouse has engineered for the textile finishing industry. Describes all types of finishing ranges and discusses advantages of Westinghouse drives for these installations. "Packaged" drives for batch process covered. — WESTINGHOUSE ELECTRIC CORP., 511 Wood St., Pittsburgh 30, Pa.

617 **AUTOMATIC CONTROL SYSTEM FOR CONTINUOUS BLEACHING**—Illustrated folder describes the new method of controlling the temperature, pressure, and liquid level in the continuous bleach operation.—TAYLOR INSTRUMENT COMPANIES, Rochester 1, N. Y.

624 **STRAIGHTENING THE WEFT IN CLOTH**—Article describing the progress made in this field, and latest machinery available for both skewed and bowed weft straightening.—MOUNT HOPE MACHINERY CO, Taunton, Mass.

629 **SEVEN TANK BALL BEARING CRABBING MACHINE**—Circular 1073 describes this 7 tank stainless steel roller bearing open width machine for scouring, open soaping, crabbing, dyeing, etc. Each pair of squeeze rolls is operated by separate D.C. motors controlled by a built-in dancer or compensating roll. Pressure supplied by air cylinder or air motors and the final nip is of 15 ton capacity for extracting, according to the circulars.—BIRCH BROTHERS, INC., Somerville 43, Mass.

641 **PACKAGE DYEING** — Machines for dyeing extracting, and drying yarn in package and on beams described in illustrated booklet on the theory of package dyeing and equipment for this process.—SMITH, DRUM & CO., Philadelphia 33, Pa.

DYESTUFFS, CHEMICALS, SOAPS

703 **WATER REPELLENTS**—Data sheet 1043 describes application of De Cetex 104, which is described

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704 **INTERPRETATION OF ANALYSIS**—The booklet "Interpretation of Analysis for the Layman" describes many of the common analytical tests made on surface-active materials, and illustrates how the analytical figures are used to deduce the composition of several materials. The booklet also contains a glossary of many terms useful to those who work with industrial chemicals, and a brief discussion of the role Nopco processing chemicals are playing in industry today. — NOPCO CHEMICAL COMPANY, Harrison, N. J.

713 **LIOVATINE ED**—Vat dyeing assistant increasing penetration and level dyeings with maximum yield of color.—SANDOZ CHEMICAL WORKS, 61 Van Dorn St., New York City.

717 **CERFAK 453**—Descriptive 4-page folder includes wetting speeds and rewetting data as well as detergency data of this fast, economical and versatile surface action agent useful in all wetting operations.—E. F. HOUGHTON & CO., 303 W. Lehigh Ave., Philadelphia, Pa.

718 **FLAKED CERFAK**—Anionic detergent with fast wetting ability, excellent for all scouring or wetting operations, according to this four-page folder which includes charts on concentrations to be used. — E. F. HOUGHTON & CO., 303 W. Lehigh Ave., Philadelphia, Pa.

745 **RAPIDASE FOR DESIZING**—Bulletin explaining in detail the properties and characteristics of Rapidase.—WALLERSTEIN CO., INC., 180 Madison Avenue, New York 16, N. Y.

751 **LOMAR PW**—Bulletin No. 21 describes the actions and uses of this dispersing agent. Two general functions described as prevention of rapid sedimentation and decrease in viscosity—fully discussed.—JACQUES WOLF & CO., Passaic, N. J.

KNITTING

801 **THE WILDMAN SINGLEHEAD FULL-FASHIONED HOSIERY MACHINE**—Literature on request from the WILDMAN MFG. CO., Full- Fashioned Division, Norristown, Pa.

810 **ALUMINUM BEAMS**—Catalog No. 1-21 describes Hayes magnesium and aluminum specialties for the textile industry. Illustrates this company's beams that are one-third the weight of conventional types.—HAYES INDUSTRIES, INC., Jackson, Mich.

812 **CIRCULAR KNITTING MACHINES**—Interesting, informative and well illustrated is this six-page folder, just released, which describes this company's small diameter circular knitting machine.—H. BRINTON COMPANY, Kensington Ave. and M St., Philadelphia

813 **THE NEW REINER HIGH SPEED TRICOT MACHINE**—168" or 84" knitting widths. A richly illustrated catalog describing its many novel features of construction and performance.—ROBERT REINER, INC., Weehawken, N. J.

SEWING MACHINES

904 **CONDENSED CATALOGUE** — A 40-page pocket-sized booklet illustrating and describing sewing machines adaptable for practically all phases of the needle trade.—WILLCOX & GIBBS SEWING MACHINE CO., New York, N. Y.

912 **ELASTIC HEMMING AND INSERTING MACHINES**—Bulletin No. 833, illustrating and describing the improved high speed machine Style 992-5, for work on undergarments, dresses, pajamas, etc.—WILLCOX & GIBBS SEWING MACHINE CO., New York, N. Y.

MATERIALS HANDLING

1003 **CASTERS AND WHEELS**—192 pages, describing casters and wheels suitable for all types of industrial applications. Every mechanical engineer and purchasing agent should have this.—DARNELL CORP., LTD., Long Beach 4, Calif.

1006 **LANE CANVAS BASKETS**—16 page illustrated booklet describing the Lane line of canvas baskets for textile use.—W. T. LANE & BROTHERS, Poughkeepsie, N. Y.

1011 **TEXTILE TRUCKS** — Booklet describing doff boxes, frames and trucks, yarn, waste, platforms, conditioning, steep lap, fiber, utility trucks, etc. Uses and description.—EXCEL TEXTILE SUPPLY CO., Lincolnton, N. C.

1031 **MOTOR-DRIVEN TROLLEY HOISTS**—12-page illustrated booklet describing Robbins & Myers motor-driven trolley hoists. Capacities from 1000 to 20,000 pounds. Bulletin 805-A. — ROBBINS & MYERS INC., Hoist & Chain Div., Springfield, Ohio.

MISCELLANEOUS

1101 **AUTOMATIC BOBBIN REFINISHER** — A descriptive bulletin illustrating and describing method of refinishing throwing bobbins on a production schedule.—J. M. NASH COMPANY, 2300 N. 39th St., Milwaukee, Wis.

1102 **BALING PRESSES** — An illustrated folder describing this manufacturer's complete line of balers for all materials. Both Downstroke and Upstroke models.—ECONOMY BALER CO., Ann Arbor, Mich.

1103 **UNBRAKO SCREWS**—Illustrated 16-page booklet No. 570 gives data on Unbrako hollow set screws, with knurled point, self-locking features. Includes miscellaneous screw and locking nut data.—STANDARD PRESSED STEEL CO., Jenkintown, Pa.

1121 **FOOT PROTECTION**—Booklets and literature available on the Stahmer wooden sole shoe which is especially designed for wet-process work, since it reduces slipping. Cost is low and many styles and types are available, and all have quality sanded heavy maple wood soles.—F. J. STAHMER SHOE COMPANY, 2349 Boies Ave., Davenport, Iowa.

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Textile Industries

Volume 116 Number 4

APRIL, 1952

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What the TEXTILE MILLS are doing

Wool products of various kinds will be manufactured by the recently chartered **Dodge Wool Co., Inc.,** 146 Summer St., Boston, Mass. John A. Dolan, 36 Eaton St., Winchester, Mass., is president.

Bolta Fabrics, Inc., Garden St., Lawrence, Mass., was recently organized for the manufacture of rayon and other fabrics. Grafton L. Wilson is president; A. C. Sheehan, treasurer.

Albany (N. Y.) Felt Co. is planning construction of a one-story building in Canada, the exact location not yet announced.

George Aibel, 275 Corbin Place, Brooklyn, N. Y., is attorney and representative for the **Manhattan Dyeing & Finishing Co.,** New York, N. Y., organized to operate a dye and finish works.

A. A. Carrigan, Bethel, N. C., has announced plans for construction of a knitting mill in Bethel, for hosiery manufacture.

Fayetteville (N. C.) Knitting Mills have under construction a one-story addition to be used for increased capacity. The firm is a subsidiary of Standard Hosiery Mills, Burlington, N. C.

Mooresville (N. C.) Mills will spend about $775,000 this year for installation of additional machinery and facilities. This continues a program begun last year.

Moss-Foy Textile Co., Inc., Mt. Airy, N. C., is being merged with **Tryon (N. C.) Processing Co.** Both firms produce cotton and rayon yarns for knitting, etc.

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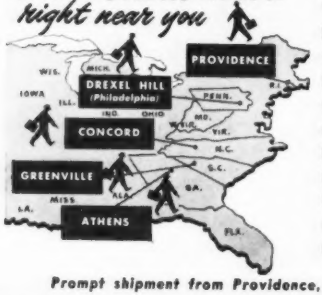

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Italian Manufacturers Reproduce Fabric Samples with Office Type Duplicating Machines

Italian textile manufacturers are said to be successfully using office type duplicating machines for the reproduction of fabric samples on paper for distribution to prospective customers.

A recent issue of "A-M News," house organ of the Addressograph-Multigraph Corp., quoted a letter from one of their Italian dealers which stated that paper replicas of textile pattern books printed on Multilith equipment were displayed at a recent textile show.

Reasons given for the wide acceptance of "paper replicas of textile books of patterns" were:

(1) It enables the textile manufacturer who is a Multilith user to beat the world competition, preparing his book of patterns several months ahead.

(2) The book can be prepared in the privacy of the user's office.

(3) Postage is considerably reduced through the use of the lighter weight paper book of patterns.

(4) Textile printing rollers can be set to print only those designs that have had large acceptance all over the world.

(5) Since the textile printing equipment is no longer required to prepare the books of patterns, it can be used exclusively for printing on textile material, thus increasing production.

It was stated that some attempt had been made to print on cloth with the Multilith equipment, but this was abandoned since the paper pattern book procedure proved far more practical and less expensive. However, Multilith equipment is being used by two hat manufacturers to print on small silk squares which are later sewn inside the hats.

Commenting on this news item, a spokesman for Addressograph-Multigraph Corp., said: "In effect, all that certain textile manufacturers in Italy have done is to prepare a series of color plates for each fast-moving pattern or design, and then they have run them off on a Multilith Model 1250 Multigraph Duplicator.

"The only precaution necessary to work of this type on a standard Multigraph Duplicator is the employment of a better-than-average operator; one who is familiar with color reproduction techniques. In other words, given a good operator, it makes no difference whether he is running a textile design in color or simply running off an ordinary two, three, or four-color reproduction job."

He concluded by saying that mills interested in reproducing by this method, cloth print designs on paper sheets for sampling purposes, should contact the nearest field office of his company for a survey of requirements and recommendations by a trained representative.

the dye house at National & Providence Mill, Providence, R. I., are planned by the **American Woolen Co.**

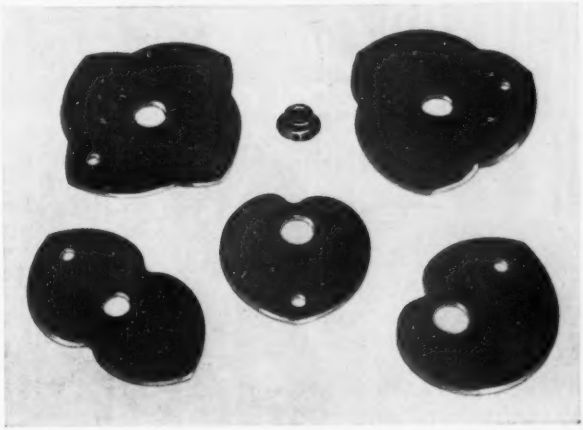
Burlington Mills have announced that henceforth their spun rayon weaving plant at Franklinton, N. C., will be known as the Franklinton Plant in honor of the community in which it is located.

Ladd Hosiery Mills, Inc., Shillington, Pa., has purchased the knitting machines of the recently liquidated Howard Hosiery Mills, Inc., taken over the building on a short term lease, and resumed production in the Howard plant.

Announcement has been made of a modernization and expansion program now under way at the **Ora Mill,** Shelby, N. C., one of the Dover chain of mills. Approximately 15,000 sq ft of floor space will be added and considerable new machinery installed.

The treasurer's office of **Lanett Bleachery and Dye Works** has been moved from Boston, Mass., to Lanett, Ala. T. Scott Avary is the newly elected treasurer.

Cone Mills Corp. has announced the purchase of the **Union Bleachery** at Greenville, S. C., from Aspinook



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Today, many mills are finding that they are able to obtain the above benefits by changing over to our steel builder cams. With the steel builder cam you can get accuracy, such as composite cams, which is not possible with a cast iron cam. We can duplicate any cam and supply any number without any variation. Modernize your equipment for present day conditions by selecting the proper cam for your work.

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What the TEXTILE MILLS *are doing*

Corp. No change in management is contemplated.

A new monthly newspaper, tabloid in size, is being published jointly by **Clinton** and **Lydia Cotton Mills,** Clinton, S. C.

A "Certificate of Cooperation" was recently awarded by the ECA to **Dublin (Ga.) Woolen Mills** for supporting mutual American-European efforts by furnishing technical assistance to the people of the Marshall Plan countries.

The **Floyd Mills** division, Rome, Ga., of **A. D. Juilliard, Inc.,** has been closed and the plant and equipment offered for sale.

The Fuld & Hatch Knitting Co. plant was recently leased by **High Rock Knitting Mills,** Philmont, N. Y., and will be used for production of winter-weight underwear for the armed forces.

The **Paw Creek Hosiery Mills,** Charlotte, N. C., were recently chartered by Claude R. Setzer and associates. Mr. Setzer formerly was a partner in D & S Hosiery Co., Charlotte.

The former A. R. Headen hosiery mill building in Hickory, N. C., has been purchased by Mr. and Mrs. E. P. Rhyne, owners of **Rhyne Hosiery Mill,** Hickory. It is expected that the building will be remodeled and equipment moved in from the building previously occupied by the Rhyne mill.

J. P. Stevens & Co., Inc., has announced the centralizing of purchases of dyestuffs and chemicals for its Delta Finishing Co. plants at Attleboro, Mass., Philadelphia, Pa., and Wallace, S. C.; also the Appleton Co., Republic Cotton Mills, and Industrial Cotton Mills. The purchasing operation will be handled at Greensboro, N. C., under the direction of B. M. Keever. Dr. Oliver Grosz will conduct the research section.

Westover Mills, Inc., Honea Path, S. C., was recently acquired by **Textron Southern, Inc.,** and will be put

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into operation shortly, employing about 225 persons. Textron Southern has also purchased the properties of **Vass (N. C.) Cotton Mill Co.** Production there is being changed from cotton spinning to spinning of rayon blends, according to reports.

Marcia Co., owned by **Leon Salkind,** president of the Calvine Cotton Mills, Inc., of Charlotte, N. C., has purchased the **Smitherman Cotton Mill,** Troy, N. C.

A new laboratory extension to **Linen Thread Co.,** Paterson, N. J., to cost $115,000, is now under construction. The laboratory will include fourteen rooms and will be of modern design in brick and glass block.

Salisbury Textiles, Inc., was recently established at Northboro, Mass., for the manufacture of women's wear woolens. C. John Abbott, formerly with John Alden Woolen Mills, Worcester, Mass., is one of the principals, the others being Thomas J. Finn, Jr., Raymond Shea, and Charles F. Dalton.

Star Woolen Co., Cohoes, N. Y., is offering without charge the laboratory service of analysis of textile fibers for other mills. The company's laboratory facilities and technical staff have been enlarged to assure quality control in the production of textile fibers and synthetic garnets, and in determining the exact analysis of their blended fibers. Each process, including blending, picking, garnetting, slivering, stripping, dyeing, desizing, and specialized manufacture of nubs is laboratory checked to insure uniformity. In addition to continuing research in the general field of producing synthetic garnets, Star will offer the analysis service to mills in the solution of problems involving the use of planned utilization of synthetic garnets.

Twenty 32-section 51-gauge knitting machines were recently purchased from Rosedale Knitting Mills by **Standard Hosiery Mills, Inc.,** Burlington, N. C. These will go into the new section Standard is adding to its plant at Alamance.

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SUPPLIERS *News*

WHAT THEY ARE DOING

At the 55th annual meeting of the **Maple Flooring Manufacturers Assn.,** Donald S. DeWitt was elected to succeed W. C. Abendroth as president. Mr. DeWitt is president of the Holt Hardwood Co., Oconto, Wis. Also elected were: W. W. Gamble, Jr., White Lake, Wis., vice-president; S. A. Wells, Menominee, Mich., treasurer; and L. M. Clady, Chicago, Ill., secretary-manager.

Rohm & Haas Co. has opened new office and warehouse facilities at Charlotte, N. C., at 302 Lawton Road. The new quarters are contained in a one-story brick-and-steel building comprising 12,000 sq ft floor area.

R. D. Houghton, president of the **Rice Pump & Machine Co.,** was recently elected chairman of the board of directors of the **Contractors Pump Bureau.** This is an affiliation of the Associated General Contractors of America.

A second special district sales office for the Fiber Glass Division of **Libbey-Owens-Ford Glass Co.** has

Mr. Wells

been established at 120 South LaSalle St., Chicago, Ill., under the supervision of Mark Joseph Wells.

Irving B. Remsen, Jr., formerly with American Viscose Corp., has joined the headquarters engineering staff of **Hall Laboratories, Inc.,** Pittsburgh, Pa. He will be technical con-

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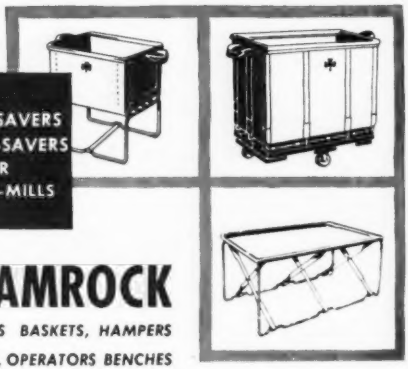

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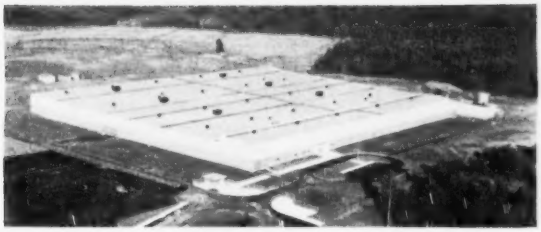

New Edwards Plant of Saco-Lowell

Saco - Lowell Shops' new 300,000 sq ft textile machinery plant at Biddeford, Maine, was inspected by a number of people at the two-day open house recently. Originally planned for production of textile equipment, the structure is now being equipped to manufacture machine guns for the defense program. It is designed for ultimate expansion in two directions, and for the erection of a mezzanine for offices.

sultant on waste water problems in the industrial, municipal, and utilities fields.

C. Perry Clanton has left the Greenville, S. C., sales office of Saco-Lowell Shops to become associated with **Reeves Bros., Inc.**

Cleaver-Brooks Co., Milwaukee, Wis., has appointed the V. N. Harwood Co., Buffalo, N. Y., as a manufacturer's repreesntative for the sale of Cleaver-Brooks boiler equipment. Its territory will include eight counties in western New York, and four counties in northwestern Pennsylvania.

Winthrop R. Corey has been appointed manager of phosphates and detergents sales for **Monsanto Chemical Co.'s** phosphate division, and James E. Crawford, Jr., assistant manager. Richard T. Clark is now sales manager of the firm's textile chemicals department at Boston. Thomas F. Gogan succeeds Mr. Clark as New York branch manager for Merrimac products; Daniel P. Shedd is now sales representative for southeastern New England; and Robert J. Johnson has been placed in the technical service section of the sales department. Monsanto has announced also substantial expansion of production capacity for its Resloom HPS, a dry powder melamine resin for textile finishing.

Atlantic Steel Co. has under construction a half-million dollar warehouse and office building at Northside Drive and 14th St., Atlanta, Ga. Increased production resulting from the firm's new electric furnace is the reason given for this warehouse expansion.

Clinton F. Robinson has been elected president and director of **The Carborundum Co.,** succeeding H. K. Clark, resigned. Paul B. Brown, Clarence E. Hawke, and William H. Wendel, formerly managers of the bonded productions and grain division, refractories divisicn, and coated products division, respectively, have been elected vice-presidents in charge of their divisions.

Norman R. Meier was recently appointed sales application engineer to the Boston district sales office of the **Reliance Electric & Engineering Co.** The Detroit district sales office has moved to larger quarters at 12326 Hamilton Ave. The new address for the Cleveland district sales office is 13967 Cedar Road.

Orville E. Isenburg has been appointed international sales manager for the **B. F. Goodrich Chemical Co.** He succeeds James C. Richards, now vice-president in charge of sales. In the plastic materials sales department, George E. Field has been

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SUPPLIERS News
WHAT THEY ARE DOING

named field sales manager; Phillip J. Weaver, technical service manager; Robert F. Dettlebach, eastern sales manager; and Clyde D. Segner, technical staff representative.

The Jonathan Handy Co., 38 Bethel St., New Bedford, Mass., has been named local distributor in that area for **Market Forge Co.**, materials handling division.

Bengt O. L. Domander has been appointed Calco sales representative in

Mr. Domander

Ontario for Calco Chemical Division, **North American Cyanamid Ltd.**

The Austin Company has established new headquarters for its special devices division in the Port of New York Authority Building, 96 Ninth Ave., New York 11, N. Y. The move was brought about by expanded activity in the development, design, and production of electronic computers, control systems, and special devices for the textile and other manufacturing industries.

Arthur D. Little, Inc., has announced the appointment of Dr. Howard O. McMahon as science director. Dr. McMahon will serve as advisor to the officers, and will be

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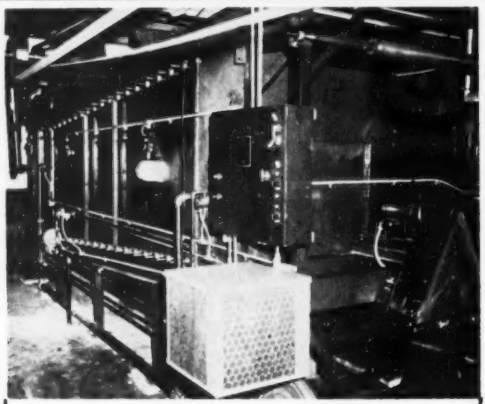

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John: Why not let the Penick & Ford Textile Laboratory in Atlanta check specifications on that cloth?
Jim

concerned with the overall strengthening, improvement, and integration of scientific techniques of the company.

A. E. Staley Manufacturing Co. has announced the appointment of William N. Dulaney as manager of the southeastern sales office, with headquarters in Atlanta, Ga. Daniel S. Miller, supervisor for the firm's package sales department in the Atlanta area, has been named assistant manager of the southeastern office in charge of package product sales. Mr. Dulaney succeeds William H. Randolph, Jr., now sales consultant in the territory. Ray E. Harroun, west coast sales manager, has been promoted to assistant manager of the firm's industrial sales department at Decatur, Ill.

Mr. Dulaney **Mr. Harroun**

The general offices of **Oakite Products, Inc.,** have been moved from 22 Thames St. to 19 Rector St., New York 6, N. Y.

Miles Sampson has been added to the engineering force of **Mount Hope Machinery Co.** He was previously with the Mount Hope Finishing Co.

D. L. Friday, secretary and general manager for the past seven years, has been elected vice-president and general manager of **Cocker Machine & Foundry Co.**

Alex J. Brown, after forty years of service with **Union Special Machine Co.,** retired on February 28. He is succeeded by Jack R. LeTourneur as representative in the Troy, N. Y., area. Frank Loglisci replaces Mr. LeTourneur in the Connecticut and lower New York State territory; Joseph LaVecchia will cover the Bronx and Edwin J. Yowell will cover Yonkers, in addition to their present New York territories.

John J. Kennedy was recently appointed assistant treasurer of **Commercial Factors Corp.**

Christopher C. Ganos has been made field service engineer for the textile machinery division of **Rodney Hunt Machine Co.** L. Vincent Neese has been added to the firm's southern region office in Charlotte, N. C., as a sales engineer.

Mr. Ganos **Mr. Neese**

Howard E. Swift of **Foster Machine Co.** has been transferred from the sales department to head up the

Perfecting Service Company's New Addition

Perfecting Service Co. has just completed an addition to its three-year-old plant in Charlotte, N. C., increasing production capacity by 25%. An additional three acres, adjoining the present plant, have been bought for future growth.

This firm manufactures a steam and refrigerating joint for use on rotating shafts and drums.

This new FIDELITY Skein Reeler permits each operator to handle four or more machines . . . a control automatically shuts off each machine when the predetermined skein weight has been reached. Machine down time is reduced by from 50 to 90% and labor efficiency is correspondingly increased. Compact, modern design streamlines your plant and provides the answer to lower manufacturing costs to meet competition.

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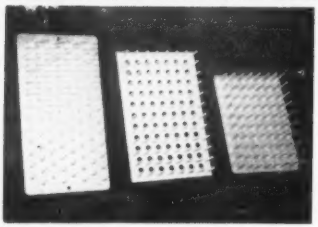
Drexel Bldg., Philadelphia, Pa.
Terrell Machine Co., 3000 South Blvd., Charlotte 1, N. C.
170 Summer St., Boston 10, Mass.



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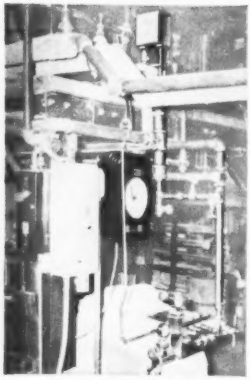

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SUPPLIERS News
WHAT THEY ARE DOING

special department now handling defense work.

Tom Turner, formerly vice-president in charge of **Westinghouse Electric Corp.'s** industrial relations, is now in charge of the motor and control division at Buffalo, N. Y. T. I. Phillips, recently in charge of the firm's East Pittsburgh divisions, succeeds Mr. Turner as staff vice-president in charge of manufacturing. Newly elected vice-president Robert D. Blasier is in charge of industrial relations, and John E. Payne heads the company's central sales district, with headquarters in Pittsburgh, Pa.

Steven P. J. Wood has been elected executive vice-president of the **Warner Electric Brake and Clutch Co.**

Howard McCall, formerly with the Sturtevant division of Westinghouse

Mr. McCall

Electric Corp., has joined the New York office of the **J. O. Ross Engineering Corp.**

In the dyestuffs division of **E. I. du Pont de Nemours and Co., Inc.,** C. Harrell Asbury was named assistant manager, domestic sales; Heinz A. Lips, manager, lakes, paper, and leather section; and Kenneth C. Johnson, manager, textiles section. Jerry D. Shaw was appointed manager of a new marketing sales section in the polychemicals department. Stuart P. Miller succeeded Mr. Shaw as manager of sales to the paper, textile, and leather industries; Dr. Albert A. Pavlic succeeded Mr. Miller as assistant manager; and Fred E. Wintzer was promoted to market studies supervisor in place of Dr. Pavlic. Robert R. Warner is now new product development supervisor, replacing Everett B. Yelton, moved to the production division.

Bagley and Sewall Co. announce the resignations of T. Carter and E. Peterson of the Watertown, N. Y., office, and J. Scheuermann of the New York office. The New York office has been discontinued, all business now being transacted at the home office in Watertown.

Saco-Lowell Shops have announced the appointment of Malcolm D. Shaffner as executive vice-president. He

Mr. Shaffner

Mr. Jones

will remain as treasurer. Robert M. Jones is now vice-president in charge of research and development, and F. Gorham Brigham, Jr., has been made secretary.

Service awards, watches, and gifts of cash were presented by Wilbur L. Watson, president of the **Watson-Williams Manufacturing Co.,** to 31 employees who had been with the firm for 25 or more years. A second group of 25 received awards for 15 years of employment.

Hart Products Corp. has announced a $400,000 expansion plan which will include complete modernization of an 80,000 sq ft all-brick building in Jersey City, N. J., the site of the firm's new plant and laboratories.

Robert G. Kavanagh has joined **Steel Heddle Manufacturing Co.** as representative in the Great Lakes

Mr. Kavanagh

territory. He replaces Windsor Bates, now in the New England territory.

Messrs. Ian M. Haldane & Co., P. O. Box 54, London, Ontario, have been appointed representatives of **Kearny Manufacturing Co.** in Canada.

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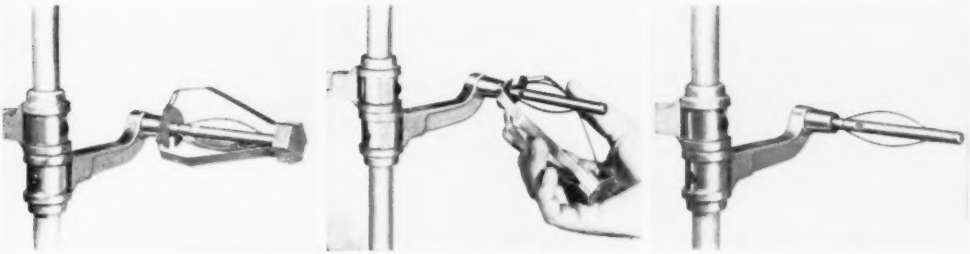

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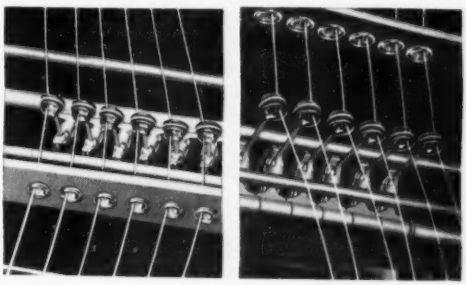

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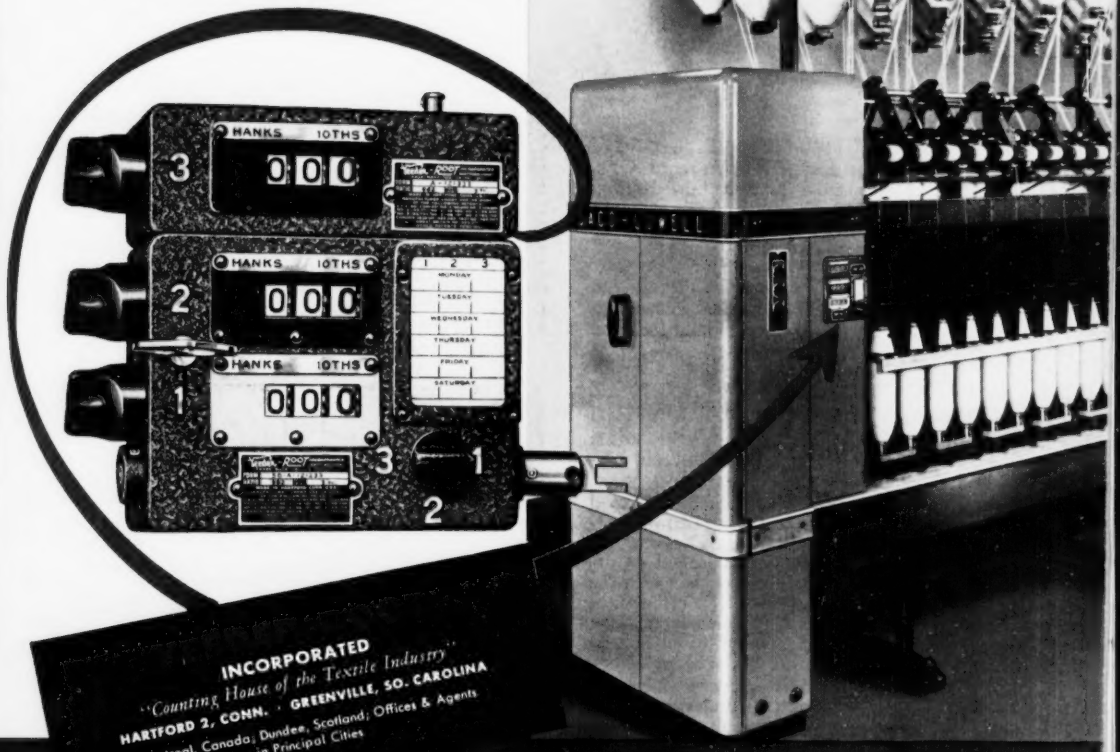

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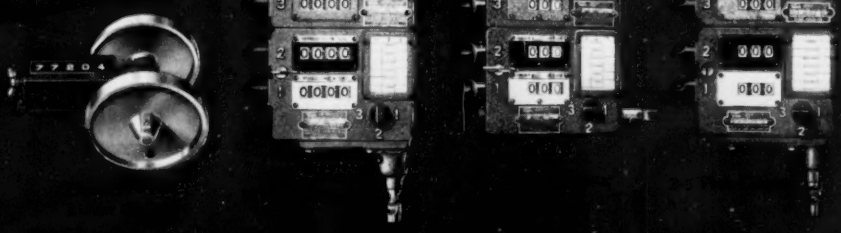
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